The Journal of the
American Medical Association

VOL. XXVII. CHICAGO, ILL., NOVEMBER 28, 1896. No. 22.

ADDRESSES.

NOTES ON SOME OF THE NEWER REMEDIES USED IN DISEASES OF THE SKIN.

Address of the Chairman delivered in the Section on Dermatology and Syphilography, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY L. DUNCAN BULKLEY, A.M., M.D.
NEW YORK.

This is certainly the age of progress, and the cry is continually for something new. The wonderful advances which have been made in medicine and surgery during the past fifty years would seem to warrant us in looking for newer remedies and measures in all departments of medicine; and indeed, the number of these which have of late years been pressed upon us by writers in medical journals and manufacturers, is so great that much confusion of thought and purpose is often induced thereby.

It is well, therefore, now and again, to stop and weigh and try to estimate the value or worthlessness of the new, and to see what of it should be added to our stock of old, and thus to recognize where true advance has been made.

It would be really amusing, were it not so sad, to read and record carefully all that is written in journals and publications relating to therapeutics, materia medica and new remedies, and then each year carefully note the true value of this and that remedy, as developed by the experience of others than the one presenting it; and it would be still more interesting and instructive to sum this up at the end of five, ten, twenty and more years.

Time and space fail me entirely to even mention the so-called and supposed "advances" and new remedies which have been vaunted during the more than twenty-five years that I have been occupied with diseases of the skin; indeed, such vast numbers of them have passed out of sight that it would require much laborious research to resurrect their ghosts. However, this would only serve to show the easy credulity of physicians and patients, and furnish a monument of disappointed hopes. In addition to the large number of remedies advocated by members of the regular profession, from time to time, reference should also be made to the innumerable remedies or combinations which have been patented and advertised, many of which have not been without some merit in individual cases, and some of which have been only too often employed or indorsed by physicians of good standing.

Therefore, before remarking upon some of the newer remedies, allow me to enter my strong protest against the restless seeking after the new to the exclusion of older and well tried and approved methods in the treatment of diseases of the skin, which seems to be so common of late years. It is not so much new remedies we need, as it is a better understanding and adaptation of those we already have. There is no king's road to learning, nor is there any short cut to the successful treatment of disease. One is, however, often led toward the contrary view by the voluminous announcements and advertisements of new remedies in modern times, whether they are written by members of the regular profession, or issued by manufacturers of drugs, or charlatans.

Dermatology is a large field, and much study and experience are necessary to attain success in practice; and yet how very little is this recognized. How often have I been asked by medical friends, "Well, what is there new that is good for diseases of the skin?" In few branches of medicine is accuracy of diagnosis more important for therapeutic success than in this, and there never can be any remedy, new or old, which is "good for diseases of the skin; every remedy must have its exact adaptations pointed out, not only in regard to the special disease in which it is of value, but also as to the phase or stage of such disease—and that is what often is not clearly stated in connection with new remedies.

In concluding these introductory remarks, I wish again to emphasize the fact that our older remedies and methods of treatment yield fairly satisfactory results when applied with skill and thought, without which no remedy can be of avail. I wish also to say that, in my opinion, new remedies, as they appear from time to time, are very much less employed by specialists in this line than by the general profession. For myself I may say, that it happens not very infrequently, that I have never given certain new remedies a single trial, because, before it seemed best to do so, further experience by others has demonstrated their relative worthlessness. I am sorry to seem thus pessimistic in my views on this subject, but being somewhat conservative by nature, each year has added to my distrust of new remedies and measures, which are often put forth by those of very slender experience.

I shall, therefore, remark only upon some of the *newer* remedies, not the newest, of which I can speak from personal experience, or from their use in the New York Skin and Cancer Hospital.

Since the time of the elder Hebra, and largely by his influence, attention has been chiefly directed toward the local study of diseases of the skin, and their treatment by external methods, and I have to record that relatively few striking advances have been made in their internal treatment; it is, indeed, remarkable how very few new internal remedies have been proposed in this class of affections of late years, and recent additions can be quite briefly dismissed.

I will not attempt to analyze the facts in regard to the injections of tuberculin in lupus, or the antitoxins in sarcoma and epithelioma, for the subjects are still so much discussed that no proper judgment can

be passed upon them. Recently Hebra has reported on the subcutaneous injection of thiosiamin in lupus, glandular swellings and exudative products, and other remedies are being tried hypodermically, but the results are still too uncertain to be recorded. The thyroid extract is also being tried and reported on in psoriasis and some other skin affections. Although I can not say much in its favor from personal experience, I am inclined to think favorably of it in psoriasis.

Antipyrin, while not a very new remedy for general use, has recently been advocated in urticaria and will often prove very effective, provided there is not some alimentary disorder continuing the trouble. When cases have resisted ordinary remedies, a moderate dose of antipyrin given three or four times daily, between meals, will often serve to stop the tendency to the eruption. Phenacetin and even antifebrin, will sometimes prove of great service as antipruritics, especially when given at night.

Many new preparations of mercury have been introduced for the treatment of syphilis in the last few years, no less than twenty-four new combinations appearing in a recent publication; but, as far as can be seen, the advantage from them relates only to their tolerance by the digestive system, and there is no one to which I can refer with special recommendation. In all it is only the mercury which is the active agent, and I have yet to find any yield better results in early syphilis than the one grain tablets of mercury and chalk given every two hours, as recommended by Jonathan Hutchinson. In the later stages of syphilis, the combinations with iodin still hold their old and valued position. The many suggestions in regard to the hypodermic use of mercury, in various forms, occasionally prove valuable in rare cases where there is great stomach intolerance of the drug, or where for some special reason very prompt action is desired; or where the patient, for social or other reasons, prefers an occasional injection to the taking of repeated doses internally. But I have never found it necessary or desirable to resort to them largely, and I question if many of those engaged in treating syphilis now use this method much more frequently than I do.

Some new preparations of iodin have been introduced, notably the iodid of rubidium, which is said to be very well tolerated by the stomach; but from a moderate experience with it, I can not see the great advantage of this expensive drug. Nor can I say much more for the iodid of strontium or several other iodic preparations; but the syrup of hydriodic acid is certainly a most valuable remedy in certain late cases of syphilis.

Turning now to the local treatment of diseases of the skin, we find that a host of new remedies have been presented of late years; among these many have not fulfilled the expectations which were raised, while many are of very considerable value, and their worth has been confirmed by many observers.

Resorcin stands prominent among these, and of its value, when properly used, there can be no doubt. To Unna is due the credit of pressing the importance of this remedy upon the profession, mainly in connection with eczema seborrhoicum, with which his name has become inseparably connected. In this eruption, which in reality is no eczema, but a parasitic disease of microbic origin, resorcin is almost a sovereign remedy. In a strength of about 6 per cent. in zinc ointment, or in solution with a little alcohol and glycerin, it will often clear off a well-defined eruption in a very few days. The solution is particularly applicable in the scalp, and the surface should be thoroughly wet with it morning and night by means of a large medicine dropper; it will thus commonly arrest at once the itching attending the scaling of the scalp, which is often one of the earliest signs of seborrheic eczema, and which often leads to a loss of the hair.

Resorcin used much stronger, even up to 25 per cent. in zinc ointment, will sometimes give brilliant results, locally, in the treatment of acne rosacea. The application is kept on for several days, and causes some little inflammation, after which the previous redness and pustular condition will be found to have largely disappeared. A second or third application may be necessary, and if the cause of the reflex congestion has been removed by appropriate diet and medication, there will be very much permanent benefit. Resorcin also proves serviceable in certain ulcerative conditions, notably those of a tuberculous type, used in a mild ointment, not exceeding 10 per cent.

Ichthyol certainly stands next in importance among the newer additions to therapeutics in dermatology, as it is also valuable in other branches of medicine, and all are undoubtedly familiar with its use. As an antipruritic it is often of great service. Added to ointments, in a strength of from 6 to 10 per cent., it is very valuable in eczema, and may be used in even quite acute conditions. In dermatitis herpetiformis a watery solution, 5, 10 or even 20 per cent. will often give more relief than any other local remedy. When the skin is too dry it can be used in almost the same strength in oil with much advantage; the same measures are of much service in pruritis ani. In burns an ichthyol ointment, about 6 per cent., will often prove the most comfortable dressing, and on old ulcers of the leg the same, though stronger, is very valuable.

Ichthyol has a power of reducing infiltrations, and in chronic conditions may be painted pure over the surface with much advantage. I have a number of times seen the greatest benefit result from painting pure ichthyol over joints enlarged by rheumatism and gout, and then applying one or two thicknesses of flannel, wrapped firmly on the part, forming an adherent dressing with the ichthyol. This may be removed and fresh ichthyol painted on daily, and wrapped with the same flannel; patients who have long suffered from these conditions have obtained more relief from this method of treatment than from any previously adopted.

In this connection I may mention another non-dermatologic use of ichthyol, although it has some connection with the troublesome skin conditions observed about the anus. This is the internal use of ichthyol, in piles, which I do not think is generally known. Taken in doses from five to fifteen drops, in water or capsule, after each meal, it seldom fails in giving relief to the congested capillaries of the lower rectum and anus, if the condition is not too exaggerated; when by long duration the blood vessels have become permanently dilated with intercellular exudation and some vascular new formation, and especially if a clot has formed in the mass, this remedy has little effect. But in the milder and recurrent cases, where small tumors form, ichthyol, if freely used internally, and perhaps externally, will give a relief which is most gratifying, and I have many patients who at once resort to it on every return of this trouble.

The disagreeable odor and the staining of ichthyol

have led to the introduction of several other substances intended to take its place. One of these is *thiol*, a sort of artificial ichthyol, less unpleasant in smell and producing less permanent stains on linen. From what I have seen of its use in the hospital, I do not think it fulfils the requirements as well as the natural drug. I may add that it is sometimes difficult to obtain the true and pure ichthyol, as there have been several synthetic products offered in its place, none of which seem as good as the imported natural product.

Another of these ichthyol-like remedies is *tumenol*, upon which a number of observers have reported. It acts much like tar in relieving itching, but it is expensive, and rather hard to manage, and from some experience with it I do not see its advantage over ichthyol.

Several astringent remedies have been introduced of late, some of which are of considerable value. Prominent among these is alumnol, an aluminum salt containing sulphur. It is in a fine white powder, very soluble in water, in glycerin, and in warm alcohol, and insoluble in ether. A 1 to 5 per cent. solution in water may be applied with advantage even in acute eczema. It is also of advantage in ointments, 10 to 20 per cent., and also in dusting powders, even up to 30 per cent.

Dermatol, a basic gallate of bismuth, in form of a yellow, insoluble powder, is also a safe astringent, used in ointment 5 to 10 per cent., or as a dusting powder.

Gallanol acts much in the same manner, and is valuable in the more chronic stages of eczema and in psoriasis. Being white and not staining or irritating the skin, it has advantages over chrysophanic and pyrogallic acid.

Gallaceto-phenone, a compound from pyrogallic acid, acts much in the same manner as that drug, and is certianly of considerable value in psoriasis, in an ointment of about 10 per cent.

Beta naphthol is an old remedy, but still one of the later additions to our dermatologic armamentarium; it has considerable power over psoriasis, in ointments, in a strength from 6 to 10 per cent., and is also useful in scabies, and of moderate value in the vegetable parasitic eruptions.

Of the newer preparations of *iodin*, *europhen* takes a prominent place. It is non-toxic, but slightly odorous, and with many has supplanted iodoform, in the treatment of venereal ulcers; it serves well also to promote cicatrization when dusted on all forms of ulceration.

Aristol still holds its place for much the same conditions, and is also valuable in an ointment, 4 to 10 per cent., in psoriasis.

Iodol is one of the newest claimants of attention, and acts very well in place of iodoform, it being said to contain 89 per cent. of iodin; it is practically iodoform and therefore a desirable preparation.

Boric acid has also come prominently into view as an antiseptic and astringent, used both as a powder and in solution in water and in ointments, in a strength of from 5 to 20 per cent. It is always a safe and often a very serviceable remedy. As an antiseptic the *peroxid of hydrogen* has steadily gained in reputation, and often serves most admirably in checking suppuration, either on external surfaces or injected into cavities or sinuses.

Several remedies of value have been brought forward of late for the relief of itching. Prominent among them is *menthol*, used in ointment or oily solutions, in a strength of from 2 to 10 per cent. Generally it is best to combine with it about double the proportion of carbolic acid, partly to aid its action and partly to overcome some of the chilly sensation produced by the menthol when used alone.

Cocain also sometimes serves an excellent purpose, added to ointments, in a strength of 1 to 5 per cent. Care must be exercised in applying it over too large a surface, for fear of systemic results, and I have sometimes thought that it acted as a local irritant.

The combination of *camphor* and *chloral*, rubbed together in equal parts till a liquid results, and added to ointments, in a strength of from 5 to 15 per cent., is also a valuable antipruritic. Its application is attended with considerable burning sensation, if there is any raw surface, but when used in proper strength this need by no means interfere with its appplication. Recently a similar compound with the addition of eucalyptus has been introduced under the name of campho-lyptus.

Campho-phenique, a patented combination of camphor and carbolic acid, is also of real value in many conditions, where an antiseptic and antipruritic action are desired. It may be used in an ointment or in oil, of a strength from 6 to 20 per cent.

A combination of equal parts of *carbolic acid*, *tincture of iodin* and *chloral* has been introduced by Dr. Cutler of New York, which answers well as a parasiticide in favus and tinea, and is also valuable as an antipruritic; it often requires to be diluted.

Various dusting powders have been brought forward. Notably the *stearate of zinc* with other remedies combined with it; these answer fairly under favorable circumstances. *Emol*, a natural silicate, has been introduced by Jamieson of Edinburgh, and often acts excellently as a powder or in paste with water, in chronic eczematous conditions.

Considerable attention has been paid to the bases in which applications are to be made to the skin, and it would occupy far too much time if I attempted to give even a brief description of the advances which have been made in this direction. Some years ago ointments were largely used, with lard as a base, to which later were added the cerates. These are all apt to become rancid, and a variety of substances have been brought forward to obviate this difficulty. The preparations from petroleum, *vaselin*, *cosmolin*, *albolene*, etc., are all valuable, but are not firm enough to make a sufficiently protective dressing, in many instances. Later we have had preparations from sheep's wool, *lanolin*, *agnin*, etc., which are more firm and sticky, and form a good addition to the petroleum products, or to other bases.

Still later the attempt has been made to provide dressings which shall be applied in such a manner that they shall adhere to the skin, and, while holding a medicament in solution or suspension, shall thoroughly cover and protect the diseased surface.

Beginning with the idea embodied in collodion, or the liquid guttapercha of the old pharmacopeia, various combinations of gelatin, with dextrin, starch, glycerin, etc., have been presented, most of which serve the purpose fairly well, but can not be detailed here. One of the most recent of these is Bassorin paste, composed of gum tragacanth 48, dextrin 25, glycerin 10, water q. s. ad 100. This may be combined with various substances, and forms a varnish-

like covering, which protects the parts well, while healing progresses beneath.

Finally, Unna has introduced quite a line of pflastermulls and salbe-mulls, in which various medicaments are incorporated. These certainly are of very considerable value in certain cases, and afford a means of keeping the remedy required in close juxtaposition with the diseased surface.

I have said nothing in regard to the various medicated soaps, and have little to say commendatory; for, as a rule, little washing is desirable in diseases of the skin, and they have always seemed to me to be an irrational method of making other applications to the skin.

There are many more of the newer remedies and measures which I might, with advantage, bring before you. But this paper has already overstepped the limits within which I had proposed to speak, and I must leave them for consideration on another occasion.

I have said enough, however, to show that there have been real advances of late years in the therapeutics of diseases of the skin; although I still feel that I must repeat what I said at the opening, that caution should be exercised against accepting much of the new which is brought to our attention. The science of medicine is a grand and difficult one, and we must not be content with ordering this or that remedy, on however high authority, without understanding the diseased condition we have to meet, and the true nature and uses of the remedy we are to prescribe. All thoughtful men must regret the ready and often careless way in which some of the newer remedies have been pushed, too often for the gain of manufacturers or proprietors, and the profession should make a stand against and repudiate the impudent manner in which many of them have been vaunted, for commercial purposes.

4 East Thirty-seventh Street.

EULOGY ON JENNER.

Delivered before the Jenner Centennial Memorial, held under the auspices of the Golden Belt Medical Society of Kansas, at Salina, Kan., Oct. 1, 1896.

BY WILLIAM B. DEWEES, A.M., M.D., LL.D.
SALINA, KAN.

Mr. President, Ladies and Gentlemen: We have gathered to-night to commemorate the life, worth and work of a really good man—a great country doctor. It is meet that the doctors of a community, and especially the members of a medical society of country doctors, pause a brief while and assemble with the people whom they serve in a public gathering like this, to pay their tribute to him who laid the foundation of preventive medicine.

By invitation of your committee, Mr. President, on the celebration of the centennial memorial of the Jennerian discovery of the protective value of vaccination, I appear before you. Your learned and greatly beloved secretary, Dr. LaFevre, has most ably and interestingly made known to you much of "The Life and Works of Jenner." In my paper I am limited to an "Eulogy on Jenner." Standing as I do on this occasion to speak for the memory of the illustrious dead, I shall earnestly endeavor to judge as I would be judged, and

> "If, unhappily, I dream,
> And prove too weak for so divine a theme,
> Let charity forgive me a mistake
> Which zeal, not vanity, has chanced to make,
> And spare the speaker for the subject's sake."

Dr. Edward Jenner was preëminently one of the noblest benefactors of the human race. His precepts and examples are ever a trustworthy guide to the true physician. He earned and held a proud position in the medical world and in the public thought. He stood for independence, for intelligence, for self-discipline, for courage, for reason, for temperate thought, speech and deed, and above all for absolute integrity. He disdained and spurned the temptations of wealth and fame. His sympathy was wide as want, and like the sky, bent above a suffering world. He found happiness in diligently laboring for the prevention and relief of human suffering, and the elevation of the race, being content with a competence sufficient to supply all real wants. His full measure of joy was realized only in the felicities of his domestic life.

This distinguished Briton was a great man, a good man, a renowned physician, whose name and work were honored by millions of his fellow-men thoughout the civilized world; even so a hundred years after his great and immortal discovery. The thoughts and deeds of such a man are truly worthy of commemoration.

The literature of many lands is rich with the tributes that admiration, gratitude and love have paid to the noble deeds of the great and honored dead. These tributes disclose the character of nations, the ideals of the human race. In them we find the estimate of greatness, the lives, the thoughts, the deeds that challenged praise and thrilled the hearts of humanity.

They teach us that men are only fragments: that the greatest walk in shadows; that faults and failures mingle with the lives of all; that silence is the most complete refutation for every misinterpretation of motive, for every unjust charge of wrong; that charity holds the scales in which are weighed the deeds of mankind; that peculiar traits, born of locality and surroundings; prejudices and passions, born of conflict and envy; superstition and egotism, born of ignorance and vanity; these are but the dust of the race—these are accidents, customs, clothes, habits, fashions that have nothing to do with the individual, except to hide character.

These tributes show us how poor this world would be without its graves, without the recorded memories of its mighty dead, without their indisputable proof that only the voiceless speak forever, and that a noble life enriches all the world.

Again, we learn from these tributes, that each discovery that marked a new epoch in the history, and started a new era in the advance of medicine, was rightfully subjected to the crucial test of that wonderful and only scientific crucible—practical experience—and thus received in due time its merited accordance of the profession. That, moreover, the authors of such discoveries have been in the meantime made to suffer most unjustly the pangs of envy and prejudice, of designing and deluding intelligence, of fanaticism and ignorance, but all to no purpose in dissuading them from their conviction.

Not all men have the courage of their convictions. So it is with doctors. But, nevertheless, the imperative duty of every doctor remains to support and stand up bravely for what he believes will benefit mankind.

Did Ambrose Paré cease to tie arteries after amputation, because all the doctors of Paris denounced him?

Did William Harvey recant from his immortal discovery of the circulation of blood, because he was renounced by his colleagues and because his discovery

proved a boomerang which cost him his practice for many years?

Did Ephraim McDowell cease to follow his convictions, because a raging and howling mob threatened to lynch him and because the entire medical world stood still to denounce him, while he dared to step forward in the advance of science to save the life of a patient, thus unconsciously inaugurating abdominal surgery?

Did Chamberlain refrain from advocating the use of the obstetric forceps, because he was ridiculed and censured as a fanatic and egoist?

Did Long of Georgia, who was the first man to produce general anesthesia and do a painless surgical operation, cease to prevent all surgical pain, because his colleagues and friends showed their contempt for so rash a deed?

Did the Atlees of Philadelphia cease to operate for ovarian tumors, because Dr. Charles D. Meiges denounced them as murderers and asked the aid of the law to stop their operations?

Did Jenner—the subject of our sketch—cease to struggle in following the light of his brain and the impulse of his heart, because he was made the victim of medical hate and scorn for years, before he was honored and rewarded for his immortal discovery, which marked a new epoch and started the era of immunization which remained to be augmented by the labors of Pasteur?

I answer, No! No! These are the examples of the character of men who had the courage of their convictions, the integrity that is guided by reason, and the sincerity that has the light of truth; men whom we ever delight to honor, because to the influence of such men alone is due the real progress in medicine.

Edward Jenner was a progressive and a loyal physician. Progress in medicine is simply improvement of the art in its application and depends upon the loyalty of the profession. With true physicians loyalty does not stand on the side of concealment, but on the side of exposure. The only dictum of medical progress is reason. Well may we say then, in the language of the Prophet Isaiah, "Come now, and let us reason together and take counsel, since

> "A little counsel now and then
> Is relished by the wisest men."

A close observer of history will note that the progress of rational medicine in each succeeding age had to contend with the influences of preceding ages. Each succeeding generation is based on the preceding one. We are the children of our parents; we reap what they sowed. In the same way the future depends to a great extent upon the present. If this be true in political, religious and social life, in matters of science and trade, it is, perhaps, most of all the truth in medicine. If we wish to throw a glance on the future of medicine we must construct it on the basis of the influences prevailing in the present age. We can predict future progress only upon the basis of judging the past and present. However, in doing so we must always make allowance for the fact that in the natural course of events forces of peculiar strength may and do come forward which we can not foresee. Such forces are, for example, the appearance on the scene, of men of extraordinary power. If politically, men like Napoleon, Bismarck and Washington gave a new turn to the history of France, Germany and America; if men like Luther in Germany and Wesley in England gave a new stamp to the religions life of their age, we point with much pride to such country doctors as McDowell, Long, Sims, Battey and the immortal Jenner, who have marked some of the most profound epochs in the medical history of the world.

Jenner stood in the front ranks braving truth, progress, harmony and peace. He was a pioneer, a torch-bearer of truth and reason, a ceaseless toiler in the great field we call the world, an honest worker for the progressive welfare of his fellow-men. He was endowed with a great mind, blessed with a heart filled with benevolence and possessed with self-discipline to philosophic study. No wonder that the remark of the milkmaid proved such a prolific seed in so fertile a soil, as only the brain of a Jenner afforded. He abhorred all connection with a progress which can not discriminate between essence and accident, between truth and her clothes.

He knew that the practice of medicine is not and can never progress to become an *exact science*, because the individual equation always contains an unknown quantity—*vital resistance*.

He worked on common ground; he had common-sense, because he knew the law of average.

He taught the principles of loyalty as a virtue which should never go out of fashion.

He ever oiled the troubled waters, knowing that medicine serves best when it builds, and not when it fights. With him the law of progress in medicine was not an inexorable edict, but a command of reason. He knew that our instincts are the legacy of ages; that the office of reason (the oldest and yet most acquired faculty of man) is not to inaugurate a sort of nihilism of the senses to strangle and crush out the instincts, as some suppose, but to train, cultivate and develop them along the lines made necessary by the ever-changing conditions of civilization.

Edward Jenner was a man of absolule integrity, of superb courage and of true sincerity. Integrity is the oak around which all other virtues cling; courage is the support and guard of the other virtues; sincerity is the perfect mirror of the mind, it reflects the honest thought.

Jenner knew that sincerity is the foundation of character and that without it there is no moral sublimity. He knew that without character, without honesty, without bravery, there is no worth; and that below indolency, below poverty, there is the rayless abyss of reputation. His soul thirsting for truth, he was ever repulsive to a practice sunk into dead formalities. He honestly braved the work before him and showed to the world what living medicine means. He not only acted without fear, but he had the fortitude of soul that bears consequences of the course pursued without complaint. He demonstrated the truth, that the heart must be in any life-work that is to be of permanent benefit to humanity; and that above all wealth, above all station, above the robed and the crowned, rises the sincere man. He knew that the confidence of mankind is not set down in writing, signed, sealed and delivered to order, but resides in honor. He followed the light of his brain and the impulse of his heart.

He was attacked and made a "mark for every passing blast of scorn to whistle through" by "a class of critical dicta everywhere current," but he never wavered and he never swerved. He said nothing harsh; he did nothing rash. He answered the insulters with a smile, and labored on quietly, faithfully and patiently as eternity, knowing what the end would be. He

knew that truth can wait, that the day would come, and he lived to be rewarded and honored by seeing the best and greatest minds of the world acknowledge the rays of light shed by his torch.

We can proclaim truly that, were it not for such brave, sincere and honest souls like Jenner, "the dust of antique time would be unswept, and mountainous errors be too highly heaped for truth to overpower."

Edward Jenner was the ideal country doctor. Born in a quiet country town, a representative of an honorable family, an orphan at the age of six years (his father dying), reared amid the influences of his native groves, meadows and the health-giving country air, and the cruel superstitions and traditional customs of his age and time, Jenner developed a passionate love for nature and a marked manhood and courage to investigate. He found the height of his ambition and the zenith of his power to benefit mankind while walking with nature—a country doctor during his entire professional life. He had the physicianhood and fortitude to search nature by following her, and to honestly reveal the light he saw. He belonged to the distinguished class of country doctors to the credit of whom truth records most of the greatest discoveries freighted with the greatest good to humanity—who did accept early Dame Nature's invitation to Agassiz:

> "Come, wander with me, she said,
> Into regions untrod,
> And read what is still unread
> In the manuscript of God."

Jenner thus learned to know early that "childhood is the era of scientific acquisition," and ever after labored as a child of nature:

> "To search through all I felt or saw,
> The springs of life, the depths of awe,
> And read the law within the law."

He assumed the whole responsibility as is common to country doctors, with whom responsibility is an educator. He wholly disapproved any attempt to stifle doubt as distinct from the effort to confront it fairly with the deeper facts of life. He taught us well the lesson of magnanimity and toleration. He was the ideal country doctor, a boon to medicine and humanity, cultivated by true and natural methods, enlisted in the service of love, daily exercised in deeds of benevolence and unselfishness, and representing a class who are walking together in the pathway of progress in honorable and rational medicine, who can justly proclaim:

> "We are the ancients of the earth,
> And in the morning of our times."

Unless all signs fail, the medical world will ever delight to honor the memory of Edward Jenner, for his love of nature and all that is truthful and good, for his benevolence and unselfish desire to prevent and relieve human suffering, and for his patient and persevering pursuit of whatever promised to result in material benefit to mankind.

When the great work of a good man has bestowed its boundless blessings upon nations for an hundred years; when it has stood the scientific test of practical experience for a century in spite of jeer and taunt; when the entire civilized world has bowed in acknowledgment its centennial homage; in honoring the memory of such a man, in speaking words of praise and gratitude to the commemoration of his name, we pay a lasting tribute to ourselves.

ORIGINAL ARTICLES.

THE FIELD OF MONOCULAR FIXATION AND ITS RELATION TO HETEROPHORIA.

Read before the Section on Ophthalmology at the Forty-seventh Annual Meeting of the American Medical Association, at Atlanta, Ga., May 5-8, 1896.

BY CASEY A. WOOD, M.D.
CHICAGO.

So little is said in English text-books on ophthalmology about the field of fixation—monocular or binocular—and so much space is given to it in that portion of foreign works devoted to physiologic optics that it seemed worth while to bring up the subject for discussion here. We are so concerned in investigating the relations of the extrinsic ocular muscles, as they are engaged in fixing some point (doubtless the most important point) immediately in front of the eyes, *i.e.*, at the center of the field of fixation, that we are apt to lose sight of the fact that the fixing of eccentric objects and points at the extreme periphery of the field is also of great importance. It should be remembered that while binocular vision may be obtained and maintained with ease, so long as the object fixed is directly in front, this result is often difficult or impossible when looking obliquely to the extreme left, right, up or down. Not only is this true in marked paretic conditions of one or other of the straight or oblique muscles, but it is also true in the so-called insufficiencies. In other words the usual tests for heterophoria or heterotropia—the various kinds of photometric measurements especially—give us but one phase of the conditions under which the extrinsic muscles do, or fail to do, their daily work.

I wish to confine my observations to one of the means by which we may measure the excursions, in all directions, of each eye separately, as indicative of the part which eccentric excursions play in the production of muscular asthenopia.

It is to Landolt that we are chiefly indebted for utilizing the field of fixation in practical ophthalmology. The monograph written by Eperon in the *Traité complet*, taken in connection with Aubert's chapters in the Graefe-Saemisch Handbuch, tell us in a few pages about all we know of this subject.

My only apology for referring to these fundamental laws of optic physiology is that I have made a few observations which may be of use to those who are now pursuing this interesting study.

The field of fixation of an eye includes all those points which the eye can successively fix, the head being completely at rest. The limits of the field represent the extreme excursions of the eyes in all directions. At least three methods (two objective and one subjective) have been and may be employed in making these measurements. One of the objective tests consists of observing, on the center of the cornea, the image of a small flame carried along the arc of the perimeter, just as one does in determining the degree of squint. Another plan of objective observation is seen in the ingenious and excellent tropometer devised by Stevens and described by him in the *Annales d'oculistique* for July, 1895. By means of this all the movements of rotation can be exactly measured.

In the subjective method we utilize the visual acuity and the perimeter. The object is usually a

letter or series of letters, which can be readily changed, attached to a carrier that is run along the arc of the perimeter as in measuring the field of vision.

Owing to the different methods employed by various observers of the limits of the normal field, authors differ somewhat in their measurements. The following, by Landolt, are as nearly correct as we can obtain them:

Directly out. . .	45°	Out and down. .	47°
Directly in . . .	45°	90° In and up. . . .	45° 92°
Directly down. . .	50°	Down and in. . .	38°
Directly up . . .	43°	93° Up and out . . .	47° 85°

These figures vary slightly in individuals, but the directly inferior angle is always the largest, while the infero-internal is always the smallest. The eyelids, margins of the orbit and bridge of the nose must always affect the result of these measurements just as they do in determining the extent of the visual field.

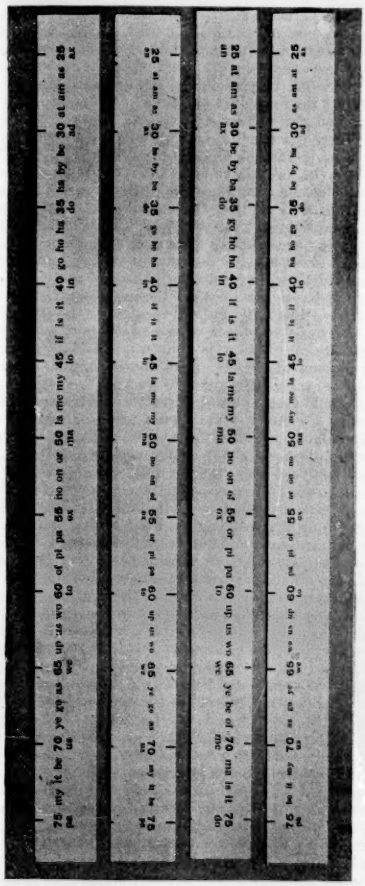
Stevens, after speaking of the importance of determining the absolute as well as the comparative rotation of the eyes, not only from side to side but up and down, says: "We have had, until quite recently, no sufficient means for determining these rotations. The judgment which we may form by watching the rotations is not to be relied upon. The perimeter is destitute of any considerable value for this purpose. By it we can not measure the downward rotation in many casses, for the pupil buries itself behind the lower lid; nor can it measure the rotation inward, for the nose interferes, and even the outward, the only one which can be generally measured, is not well measured."

While I recognize, in general, the advantage of objective over subjective tests, it appears to me that Dr. Stevens' objections to the subjective method of determining the limits of the ocular excursions are weakened by the fact that what we wish chiefly to know is not the extreme limit of rotation of the eye in various directions so much as its limit of observation. What we desire to ascertain in practice is whether the various muscles, alone and in combination, are capable of making all the excursions required for the purpose of securing and maintaining single and binocular vision. Whether an eye would be able to fix an object further to the right or left if the nose were removed, or one higher or lower if a projecting lid or orbital margin were cut away is not of essential importance.

We are usually advised, also, to make use of the candle image when the eye is amblyopic or can not read large type. Now these are just the conditions under which we are not usually concerned about the fixation field. It is the eye that sees and not the blind eye that causes trouble in defective excursions. If an eye takes no part, or only a feeble part, in the work of fixation, why trouble ourselves at all about its rotation?

These considerations caused me to attempt to remedy what seems to be certain defects in the technique of determining the field of monocular fixation, as it is commonly applied. So far as I know, the most effective plan employed—decidedly superior to the old Helmholtz-Berthold method—is that exhibited in the modified Landolt apparatus attached to the McHardy perimeter. The head of the patient is placed in the primary position and fixed by biting a rigid crossbar of hard wood.

Lang thus describes the method of examination: "The balanced test object exhibits a single word of two or three letters printed with the smallest type that can be distinctly seen by the eye under investigation. The patient is seated at the perimeter, directly facing the fixation point, with his head erect and his chin supported on that half of the chin-rest which brings the eye that is about to be tested into the middle line, opposite the fixation spot. If the patient can not maintain this position during the whole examination, he is asked to grip the bar of the bite-fixation-apparatus between his teeth, which effectually prevents the least movement of the head. The other eye is covered with a pad and bandage, or its lids are closed and held down by the lashes with the tip of the patient's forefinger. The words in the test object, in the various sized type, are now exhibited, and one, in the finest print that the eye can read, either without or with glasses, is exposed after the test object has been moved to the end of the perimeter arc, which



is extended horizontally outward. While the patient, without moving the head, turns his eye to the utmost outward toward the extremity of the arc, the observer slowly moves the test object inward toward the fixation point, but stops directly the patient can read the word, and at once records, in degrees, the position which the test object occupies in the arc.

"The arc is now placed horizontally inward, the test object is moved back again to the extremity of the arc, a fresh word is exposed, and the observation is repeated. When the field of fixation has been tested in the horizontal meridian, which is all that is generally necessary, the examination of the remainder of the field can be ascertained by placing the arc in each 30 degrees of the circle, and recording the results on a field of vision chart.

"When the examination of one eye is completed, the head is shifted to the opposite side of the chin rest and the second eye is tested in the same manner."

On making examinations with this apparatus I long ago noticed that the continuous effort to hold the eye at its extremest rotation, in so many directions, was exceedingly fatiguing and often made it difficult to complete the examination. It was also remarked that the results varied in the same individual, and I feel certain that these different measurements are due to the fatigue incident to the attempt of the eye to fix an object whose exact position at the extremity of rotation is unknown. The nystagmus-like movements of the globe, after a number of these trials, is quite noticeable.

Instead of using an object attached to the carrier on the perimeter arm I have used an exceedingly simple device whereby the rotation of the globe in any direction is rapidly and easily measured. It may be used by all persons who can read Jaeger xii at fifty centimeters, and may even be employed for others whose visual acuity at that distance is considerably less. Four strips of unglazed parchment paper have printed on them words of two letters placed between, as well as below, figures representing the degrees of latitude on the perimeter arc. These strips are, together, placed in position on the arm of the perimeter, the patient's head being in the primary position (I usually do not consider any elaborate fixation necessary) and he is asked to read to the lower line, as far away from the center as possible. This accomplished he is requested to give the figure placed above the word just recognized and to try and read, farther out, additional letters on the figure line. Each word beyond represents about one degree on the scale and the number of words so read added to the previous figure gives the limit, in degrees, of the field in that direction. As each quadrant of the circle is passed over, a slip of paper is removed, revealing the next paper whose lettering, being different, suggests nothing to the person under examination. I have found that instead of making the vertical letters face up and down one can accomplish the purpose of distinct vision by printing them with type of a bolder face, thus providing for those rare cases in which it is desired to test the muscles of an eye that can not read Jaeger xii, or thereabouts.

My investigations of the field of fixation have developed nothing new except that the normal field, in persons whose view is not cut off by the nose, lids or orbital margins, seems to have wider limits than those set down by Landolt, particularly in the downward direction.

The causes that determine an unusual shape or abnormal position of the whole field, as pictured on the perimetric chart are, commonly, actual paresis of one or more of the external muscles of the eye. Apart from an abnormal configuration of the face, we also recognize those influences that underlie the various forms of heterophoria, *i. e.*, general fatigue, weariness of one or more of the extrinsic muscles, age, defective innervation and, possibly, congenital defects in the muscular fibers. But in cases of heterophoria occurring during the fixation of objects directly in front of the eye, the state of the refraction exerts a very wide influence on the size, shape and situation of the whole field. Its boundaries are enlarged in moderate degrees of hyperopia, but are diminished in the higher grades, owing, as Landolt thinks, to the developed muscles acting on a not too large globe in the former instance and to the lack of development, in the latter case, affecting the muscular elements in common with all other parts of the eye. It is restricted in the elongated and enlarged globe of the extreme myope, owing mainly to the greater size of the eye and the weakness due to the stretching of the muscles.

My former assistant, Dr. T. A. Woodruff, and I have carefully measured a large number of fields, normal and abnormal, in persons of all ages and all states of health and refraction, and I feel justified in thinking that when carefully done, using the device I have just described, the defective excursions and often the defective muscle or muscles can be readily detected by a glance at the perimeter chart. Take for example a case of simple left hyperphoria of 4 pr. diopters. Here one obtains a perimetric picture whose irregular outline covers, perhaps, as much ground as the normal field but whose directly upward and downward limits in the left eye are higher than normal. Thus we have not only an indication of the amount and kind of the heterophoria but we are enabled, by a comparison with the normal field, to arrive at a conclusion not only as to the actual direction of the muscular defect but, also, in some cases, to venture an opinion as to particular muscle or muscles involved.

DISCUSSION.

Dr. G. C. SAVAGE, Nashville—In studying binocular fixation we must have a few things constantly in our minds. One is, that the yellow spot of Soemmering is the point from which the visual axis starts. From this point it must pass through the center of the retinal curvature, in monocular vision, cutting the cornea wherever it may, sometimes in the center, above, below, to the outer side or within. If the visual axis, for the left eye, should pierce the cornea beneath the center, while the visual axis, for the right eye, pierces it above, in binocular vision there would be a necessity for action of the superior rectus of the right and inferior rectus of the left, in order to make the visual axes meet at the point of fixation. Even if the muscles are well balanced in their inherent power, a test of these eyes would show a left hyperphoria. It is only in a case of this kind that the use of a prism, in position of rest, would be justifiable, as I have shown before now. In the same way I might be able to show an exophoria, also an esophoria, dependent on the fact that the visual lines do not cut the cornea at the proper points. The Javel ophthalmometer, if it did nothing else, would be worth its cost, in that it always shows quickly and accurately, the decentration of the yellow spot of Soemmering, or, what is the same thing, the misplaced cornea.

Dr. D. S. REYNOLDS, Louisville—In my experience all the other methods tried have been more or less unsatisfactory and

am quite willing to try Dr. Wood's method as soon as I shall have had time to master it.

Dr. C. A. Wood—This instrument does not take the place of the various phorometers. I thought we ought to know something more than the relative insufficiency of the muscles. We want to know what particular muscle is at fault. This is something of a step in that direction.

A CONTRIBUTION TO THE QUESTION OF REMOVAL OF THE LENS IN MYOPIA.

Read in the Section on Ophthalmology, at the Forty-seventh Annual Meeting of the American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY HERBERT HARLAN, A.M., M.D.

BALTIMORE, MD.

My contribution is in the form of a report of two cases, both the result of accident, and in one case thirty-three years have passed between the accidental operation and the observation; much the longest period of which I am aware.

Jno. Harvey, aged 32, a Welshman and laborer, by occupation, had always been very shortsighted. He carried in his pocket a pair of — 13 D. glasses which he occasionally used for reading. By their help it was not necessary to hold the print so near his face. For distance, he said they were not much good. On January 8, he received a blow in the right eye, which, he said, had always been the better. Some hours later he came to me at the Presbyterian Eye and Ear Hospital. There was a bruise on the right cheek and eye lid and examination showed the lens still perfectly clear, dislocated into the anterior chamber. The upper edge was a little above the center of the pupil and with the ophthalmoscope the fundus could be easily seen, either through the lens or above it, and by the indirect method, in one position, two images of the optic nerve could readily be seen, at the same time. There was some redness and pain. The left eye had high myopia with choroidal atrophies and very little vision. Removal of the lens was advised and the following day the operation was performed, a downward corneal section being made. There was some loss of vitreous but the healing process was uneventful. The iris was not touched at the time of operation, but at the present time is tucked down behind, as it were, though not adherent to the corneal wound. The appearance is as if there had been a large downward iridectomy done. On February 4, + 3.50 D. S. + 4.50 cyl. 165 gave 15-40 vision and 8 D. S. same cyl. enabled him to read No. 1 readily. On looking out of the office window where a mild storm was in progress he remarked that it was the first time he had ever seen snow falling when on the inside of the house. The glasses indeed would indicate a much less degree of original myopia than — 13 D. the old glasses. Fukala, Pflueger, Von Hoppel and others have noted the very high refractive power of the human lens in these cases.

The second is a case of accidental removal of a lens, in a child, with high myopia, resulting in good vision at the age of 45. Fellow eye at that time lost by choroidal atrophy.

Sister M. a cloistered nun, aged 45, stated that she had always used her right eye, but of late, she did not see well with this one and that the left, which had been injured, was now the better, but she could not read at all. I found the right had only a vision equal to the counting of fingers at eighteen inches. With the left V. 20-50 and was slightly improved by plus lenses up to 2 D. The ophthalmoscope revealed in the right high myopia with extensive choroidal atrophies while in the left there was seen, behind the iris, an irregular opening through what was evidently the remnants of an opaque lens capsule. Further questioning brought out the fact that the injury was caused by a blow from the end of a stick and occurred at the age of 13 years.

It was then plain that there had been, at that time, a traumatic cataract, followed by absorption of the lens substance. There was no fundus trouble in this eye and 5 D + enabled her to read "brilliant" at twelve inches.

So here was a case of accidental removal of a lens at 13 followed by good vision, 20-50 without glasses, at 45, in this eye, while in the fellow, in which no attempt at correction by glasses, has ever been made, the myopia had probably increased, the choroid had atrophied and all useful vision had been lost. Would removal of this lens in childhood have saved this eye? The fact of about 2 D. of accommodation in an eye without a lens is of some interest. It is likely that a carefully adjusted glass would improve the given vision in the left eye, but I was obliged to see the patient at the nunnery and to use a candle for the ophthalmoscopic examination. The patient was apparently embarrassed and gave hesitating answers and no attempt was made to correct possible astigmatism.

DISCUSSION.

C. M. Hobby, Iowa City—In high myopia the necessary concave glasses diminish the size of retinal images and this is the sole reason why in otherwise normal conditions the operation should be suggested. This difficulty is scarcely appreciated by the patient. In cases of retinal disease, or choroiditis the removal of the lens in high myopia might, by enlarging the distinct retinal image, be of advantage. In cases where, in high myopia, degenerative changes appear the early removal of the lens is indicated. I have seen one case in which the lens was removed with resulting vision, without glasses, of 20-40.

C. W. Kollock, Charleston, S. C.—I have recently seen a German music teacher with a myopia of about 30 D. who was going to Europe to have his lenses removed. It is doubtful whether the operation would improve his condition as he has posterior staphyloma.

A. W. Stirling, Atlanta—I have seen operations performed, one by Scholler, having the desired effect. Two operated upon in London went to suppuration. In the third case the retina became detached to the full extent so that the eye was worse than before.

C. A. Wood, Chicago—I think I performed the first operation of the kind done in this country. The case was as follows: March 2, 1891, A. M., seamstress, 17 years old, been myopic for eight years, lately getting much worse. Could not go to school and now unable to do any sort of work. If she attempts to sew her eyes ache and feel as if they were bulging out of her head. Glasses make objects brighter but do not otherwise help. V. R. fingers at seven feet, with —14 D. 20-100. V. L., fingers at eight feet, with —15 D. 20-70. There are sharp temporal crescents of about ½ d. d. in both eyes. No choroiditis, although the choroidal vessels can be readily seen over the whole background. Macular regions show as cherry red spots. March 3, needled the right lens—a small central opening. Used atropin and hot water to relieve subsequent pain. In a week tension with pericorneal injection and pain. Made a corneal opening and removed most of the lens. Did two subsequent needlings. August 5, V. R. 20-100. The pupil is irregular and attached to pupillary membrane. In December needled left lens without mishap. The lens absorbed nicely V. L. 20-100.

With L. 90° + .50 + 14 = 20·50 and with 90° + 50 + 8 = J 2. Did not order lenses for right eye although with this correction on left side patient was able to read and do other near work and eyes were comfortable. I did not see her again until March of this year when the following condition was observed: secondary cataract V. R. fingers at 5′ and improvement. V. L. + 9° + .50 + 3 12·200 and 90° + 50 + 8. J xvi. Left membrane needled and with 90° + 75 + 2.50 = 20·50 and 90° + .75 + 6.50 = J2. Two weeks later did a De Wecker's capsule scissors operation, after which patient obtained 20·50 vision and could read J2 and do near work without trouble.

THE DEGENERATE JAWS AND TEETH.

Read in the Section on Neurology and Medical Jurisprudence, at the Forty-seventh Annual Meeting of American Medical Association, held at Atlanta, Ga., May 5-8, 1896.

BY EUGENE S. TALBOT, M.D., D.D.S.
FELLOW OF CHICAGO ACADEMY OF MEDICINE.

Next to the ears, the jaws and teeth (as was to be expected from the variability of these organs in allied animals), are most affected by degeneracy. This is particularly true of the vertebrates; especially the mammals, as might have been anticipated from their phylogeny or line of descent. At the head of the vertebrates is man; at the foot is the lancelet (*amphioxus*), most akin to those semi-vertebrates the ascidians, who, in their larval phase, are higher than when adult and whose life history excellently illustrates that potent phase of evolution, degeneracy.[1]

The lancelet[2] has a spinal cord inclosed in a soft semi-cartilaginous canal (the notochord). It is practically destitute of a brain. The cerebral vesicle which represents this, is a plain cavity without true subdivision into ventricles. There is no cranium and the median eye is a mere pigment spot with which it is able to distinguish light from darkness. Behind this is a small pit lined with cilia for olfactory purposes. Into this the cerebral vesicle of the larval lancelet opens. The mouth is well guarded against the intrusion of noxious substances, which have to pass through a vestibule richly provided with sensitive epithelial cells resembling the taste buds of the human mouth. There is no heart. In this the lancelet is lower than the ascidians, the insects, crustacea and many mollusks. It approximates the worms, which, despite a very elaborate vascular system, are destitute of a heart, the function of which is performed by contractile blood vessels. From an embryologic and morphologic standpoint, the proximate ancestor of the vertebrates seems to have been a free swimming animal intermediate between an ascidian tadpole and the lancelet, while the primordial ancestor was a worm-like animal organized on a level with the starfish. The vertebrates, embryologically, develop from this stage to the lampreys thence to the cartilaginous fish (shark), to the amphibia (frog, toad, axolotl), to the reptiles and thence to the oviparous mammals (duckbill and spiny ant-eater), to the lemurs and through forms like the pithecanthropus erectus to man. The present study will be confined to the mammals, passing from the simple types of teeth found in that oviparous edentate, the spiny ant-eater (echidna) of Australia to the indeciduous ancestors of the sloths and armadilloes and their descendants, inclusive of the dolphins and whales, whose teeth, both in the fetal Greenland and adult sperm whale, preserve this old type. The whales, it should be remembered, have degenerated from the hoofed mammals to suit their environment. While, as in the edentates, these teeth may be few, they may also (as in the insectivorous marsupials) approximate those of the reptilia in number (60 or 70 on a side) and characteristic location.

The evolution of this primitive, tooth to the bicuspid and molar type has been explained by two theories: the concrescence theory and the differentiation. The first, advanced by Magitot in 1877, was later advocated by Schwalbe, Carl Röse and Kürkenthal. The last was offered by Osborn and Cope. Of these two contrasted theories Osborn[4] has given the following lucid presentation:

"Now let me illustrate, in a very simple manner, what is meant by the theory of concrescence and how we can imagine that the human molars have been built up by bringing together a number of isolated teeth. Placing a number of conical teeth in line, as they lie in the jaw of the whale, they would represent the primitive dentition. In the course of time a number of these teeth would become clustered together in such a manner as to form the four cusps of a human molar, each one of the whale-tooth points taking the place of one of the cusps of the mammalian tooth—in other words, by a concrescence, four teeth would be brought into one so as to constitute the four cusps of the molar crown. Vertically succeeding teeth might also be grouped. Now, what evidence is there in favor of this theory, and what is there against it? First, there is this, that all primi'ive types of reptiles from which the mammalians have descended and many existing mammals, as we have noted, have a large number of isolated teeth of a conical form; secondly, we find that by a shortening of the jaw, the dental fold or embryonic fold, from which each of the numerous tooth-caps is budded off in the course of development, may be supposed to have been brought together in such a manner that cusps which were originally stretched out in a line would be brought together so as to form groups of a variable number of cusps according to the more or less complex pattern of the crown. What may be advanced against this theory? This, and it is conclusive to my mind: We find at the present time that cusps, quite similar in all respects to each of the cusps which form the angles of the human molar, are even now being added to the teeth in certain types of animals, such as the elephant, whose molar teeth cusps are being complicated now or until very recent times. Then we find in the mesozoic period certain animals with tricuspid teeth. Now, according to the theory of concrescence these teeth ought not to show any increase of cusps in later geologic periods; but as we come through the ages nearer to the present time we find that the successors of those animals show a very much larger number of cusps. How is this increase of cusps to be accounted for? Has there been a reserve store of conical teeth to increase the cluster? No. Most obviously, to every student of the fossil history of cusps there is no reserve store, but new cusps are constantly rising up on the original crown itself by cusp addition. However, do not let me give you the impression that these researches of Röse and Kükenthal are not of the greatest value and interest; we shall see later on how the very facts of embryology which are advanced by Dr. Carl Röse in support of his hypothesis can be

[1] Ray Lankester: Degeneracy, a Phase of Evolution.
[2] Willey: The Amphioxus.
[3] Haeckel: History of Creation, p. 242, Vol. II.
[4] International Dental Journal, July, 1895.

turned against him and used to support the differentiation theory.

"Now let us turnto the differentiation theory and see what evidence we have of that. Let us go back to a very remote period of time, through the geologic ages of the pliocene and the miocene, through the eocene, round, reptilian, or dolphin-like teeth. There are also some aberrant types which possess complex or multitubercular teeth.

"These teeth begin to show the first traces of cusp addition, as shown in the plate at the beginning of this article and in the accompanying key to this plate.

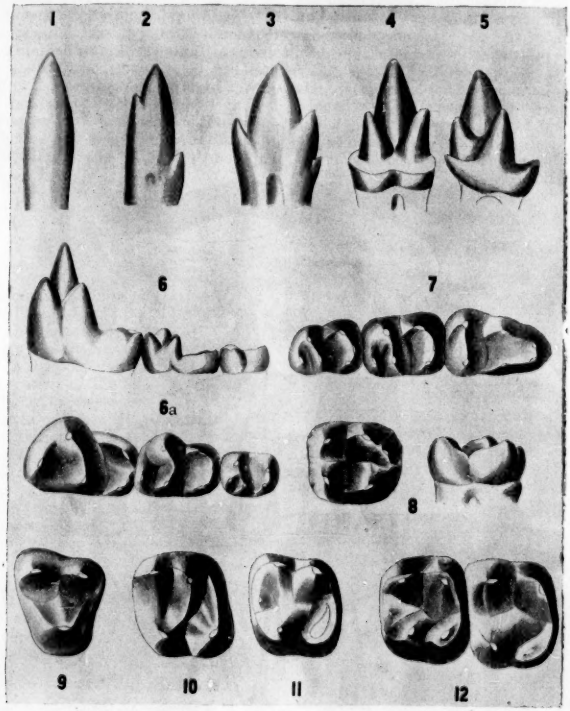


PLATE A.

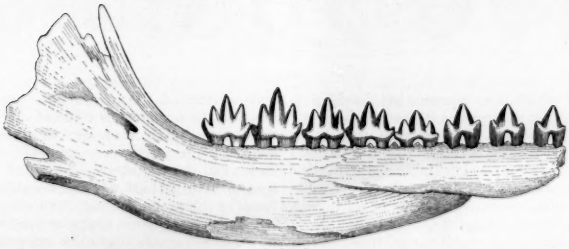


PLATE B.

through the cretaceous or chalk period, and even the jurassic. Still further back we go to the triassic, and the interval between this and the present period has been estimated at over ten million years. Now, in the triassic we find the mammalia, or the first animals which we can recognize as mammalia, possess conical,

Here (Fig. 1, Plate A) we have represented the teeth of the *dromatherium*, an animal found in this country in the coal-beds of North Carolina, and on the sides of the main cone are cusps or rudimentary cuspules. In this enlarged model you see that on either side of the main cone are two cuspules. These teeth were

found six hundred feet below the surface in a coal-mine, and in the same mine we find another animal, represented by a single tooth here (Fig. 2), in which these cusps are slightly larger. These cusps have obviously been added to the side of the tooth, and are now growing. Then we pass to teeth of the jurassic period, found in large numbers both in America and in England, but still of very minute size; and we observe the same three cusps, but these cusps have now taken two different positions; in one case they have the arrangement represented in Fig. B; the middle cusp is relatively lower, and the lateral cusps are relatively higher; in fact, these cones are almost equal in size; these teeth are termed *triconodont*, as having three nearly equal cones. But associated with this of *triconodont* is another animal named *spalacotherium*, you see in Fig. 5, *amphitherium*. To sum up: We have a reptilian cone, two cusps added to it, and a heel—four cusps altogether and we shall now see what relation these bear to the human molar. First let us turn to some transitional forms. Examine a molar of the living opossum, a marsupial, which still distinctly preserves the ancient triangle. Look at it in profile, in side, or in top view, and see that the anterior part of that tooth is unmodified. This triangle we also trace through a number of intermediate types. In this figure (Fig. 6) of *miacis*, a primitive carnivore, we observe a high triangle and a heel, and when we come to look at it from above (6 a) we find that the heel has spread out broader, so that is as broad as the triangle. Now, the three molars of this animal illustrate a most important principle—namely, that the anterior triangular portion of the crown has been simply leveled down to the posterior portion of the crown. Compare these three teeth, therefore, and you see illustrated a series of intermediate steps between a most ancient molar and the modern molar of the human type. The second tooth is half-way between the first and third. Look at the second molar from above and you see it has exactly the same cusps as the first, so it is not difficult to recognize that each cusp has been directly derived from its fellow. Now direct attention to the third tooth of the series (Fig. 7), for it is of equal significance with the others. This tooth has lost one of its cusps; it has lost a cusp of the triangle. It is now a tooth with only half the triangle left on the anterior side, and with a very long heel. That tooth has exactly the same pattern as the lower human molar

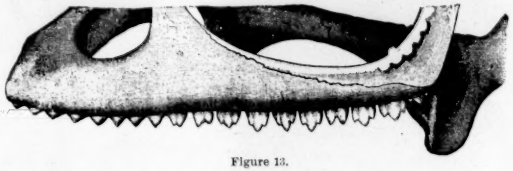


Figure 13.

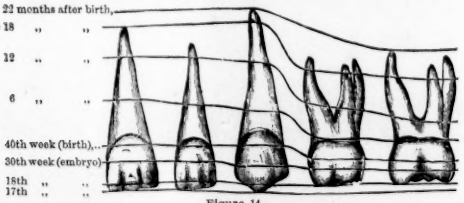


Figure 14.

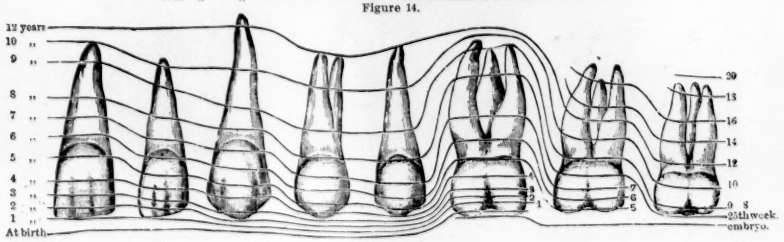


Figure 15.

the teeth type of which are represented in Fig. 4. This is one of the most significant teeth which we have among all the fossil series, because this tooth illustrates the step that was taken in the transformation of a tooth (triconodont) with three cusps in line to a tooth with three cusps forming a *triangle;* for the primitive cusp is now seen to be the apex of a triangle, of which the two lateral cusps are the base. Now, this fact in itself is of great significance, because this tooth in this single genus is the key of comparison of the teeth of all mammalia of the great class to which man belongs. By this we are able, as you shall see, to determine that part of a human molar which corresponds with a conical reptilian tooth. The stage shown you is the triangle stage; the next stage is the development of a heel or spur upon this triangle, as

tooth (Fig. 8); the only difference is that the heel is somewhat more prolonged. These teeth belong to one of the oldest fossil monkeys, *anaptomorphus*. I have no doubt many of you have observed, in the examination of human lower molars, that occasionally instead of having four cusps they have five. The fifth cusp always appears in the middle of the heel, does it not, or between the posterior lingual and the posterior buccal? You find this in the monkeys and in many other mammals, but I know of no record of the ancient anterior lingual reappearing. So we see that the human lower molar tooth with its low, quadritubercular crown has evolved by addition of cusps and by gradual modeling from a high-crowned, simple-pointed tooth."

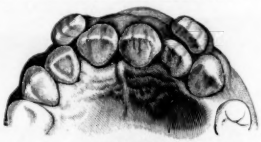


Figure 16.

Carl Röse[5] has contributed considerably to our knowledge of the evolution of the teeth. He says: "I find no mention in literature of the development of the teeth of the chamæleonidæ, nor of any other acrodont reptile. As the chameleon possesses multituberculate molars in the posterior portion of its jaws, therefore the development of the teeth in this animal must be doubly interesting, especially with regard to the origin of the molars generally. I examined the heads and jaws of both young and adult animals. Unfortunately, I was unable to procure embryos of the chameleon. All the material was sectionized into series of 20 μ thickness, and doubly stained with alum carmin and bleu de Lyons. The figures have been drawn with Oberhäuser's camera. Figure 13 shows the teeth of the upper jaw five times magnified. The

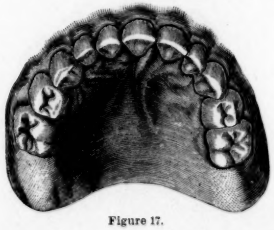


Figure 17.

anterior teeth are unituberculate, the posterior ones bi- or trituberculate. All teeth are fused to the edge of the maxilla. *There is no shedding of the teeth in the chameleon*, nor could I prove it to take place in hatteria; but still there is, especially in the upper jaw, behind the functional teeth, a well-developed dental or reserve ridge. On its posterior end there takes place, throughout life, a continuous new formation of teeth. Accordingly, older animals have always a larger number of teeth than young ones. Although I examined macroscopically, with a lens, a number of heads of the chameleon, and microscopically six different series of sectionized jaws, I never succeeded in finding any indications of reserve teeth."

[5] October, 1893, Dental Cosmos.

To alienists, biologists, criminal anthropologists and sociologists the human jaw and teeth are of peculiar interest since their study establishes many points in evolution and environment not clearly determinable in other structures. Their study enables the observer without much difficulty to determine inherited and acquired stigmata. For this purpose the teeth should be studied from the first evidence of their development until they are all in place, which occurs normally in most cases, by the twenty-second year.

Teeth enamel is formed from the epiblast; and dentine, cementum and pulp (except as to nerve tissue)

Figure 18.

from the mesoblast. The enamel organs of the first set form during the seventh week of fetal life, the dentine bulb during the ninth week. At this period the tooth obtains its shape and size and calcification begins at its periphery. This models the enamel cap which fits over the dentine like a glove. When imperfections in hand or fingers exist these deformities are distinctly observed upon the glove. In precisely the same manner are observed the different shapes and sizes of the incisors, cuspids and molars. Calcification of the teeth begins at the seventeenth week of fetal life. Illustration (Fig. 14) shows the progress of calcification and development of the temporary set of

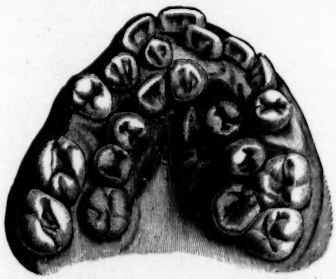


Figure 19.

teeth. Examination will show that any defect in nutrition from conception to birth (due to inherited states or maternal impressions) has been registered upon the teeth. The state of the constitution and the locality registers the date of such defects. Thus, if the tooth as a whole be larger or smaller than normal or abnormally irregular, taint is undoubtedly inherited from one or both parents. If on the other hand, there be defect at any part, on the crowns of the teeth and the contour be perfect, the date of malnutrition can be easily determined by consulting this chart. More or less than the normal number of teeth abnormally placed demonstrate the existence of inherited defect since the germs must have been deposited at the periods mentioned. No absolute rule can be

laid down as to the date of the eruption of the teeth. The teeth of the temporary set erupt nearly as follows:

	After Birth.	Time of Eruption.
Lower central incisors	7 months	1 to 10 weeks
Upper " "	9 "	4 to 6 "
Upper and lower lateral	12 "	" "
First molars	14 "	1 to 2 months
Cuspids	18 "	2 to 3 months
Second molars	26 "	3 to 5 months

The enamel organs and dentine bulb for the permanent teeth form just before birth (Fig. 15) in like manner with the temporary set. They form just

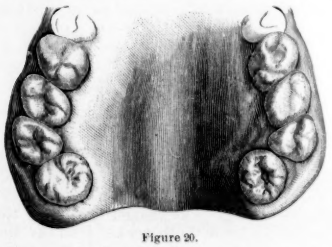


Figure 20.

above the temporary set on the upper and below on the lower jaw. The permanent molars begin to calcify at the twenty-fifth week of fetal life. The permanent incisors do not calcify until a year after birth. Any deviation in size or contour of the permanent teeth, from the normal, must hence be due to defect in nutrition in the dentine bulb between the fifteenth and twenty-fifth week of fetal life. Any deviation in calcification (except the cusps of the first permanent molars) must occur after birth. At the third year twenty-four teeth are fairly well calcified. At the fifth year the second permanent molars and at the eighth year the third molars or wisdom teeth begin to calcify.

The following table gives the age of eruption of permanent teeth.

First permanent molars	Circa 6 years
Upper and lower central incisors	" 7 "
Upper and lower lateral	" 8 "
First bicuspids	" 9 "
Second bicuspids	" 10 "
Cuspids	" 11 "
Second permanent molars	" 12 "
Third " "	" 17 to 24

Figure 21.

Man at his present stage of evolution has twenty teeth in his temporary, and thirty-two in his permanent set. Any deviation in number is the result of embryonic change occurring between the sixth and fifteenth week for the temporary teeth and the fifteenth week and birth for the permanent. The germs of teeth which erupt late in life and are (properly) called third sets, of necessity appear ere birth and are completely formed at the beginning of the second year although they remain protected in the jaw until late in life.

More than twenty teeth in the temporary or than thirty-two in the permanent is hence an atavistic abnormality.

From a maxillary and dental standpoint man reached his highest development when his well developed jaws held twenty temporary and thirty-two permanent teeth. Decrease in the numbers meant, from the dental standpoint, degeneracy, albeit it might mark advance in the man's evolution as a complete being. Marsh[6] points out that in the New Mexican lower eocene occur a few representatives of the lowest primates such as the lemurarius and limnotherium, each the type of a distinct family. The lemurarius, most nearly allied to the lemurs, is the most generalized primate yet found. It had forty-four teeth in continuous series above and below. The limnotherium, while related to the lemurs, had some affinities

Figure 22.

with the American marmosets. Dr. A. H. Thompson[7] in discussing the "missing teeth" of man remarks that these researches of Marsh suggested and subsequent studies aided the solution of the problem of the origin of the extra teeth (known as supernumeraries) that sometimes occur in man. These, usually regarded as pure freaks like polydactylism, are however beautiful illustrations of atavism and demonstrate that man during his evolution from the lowest primate has lost twelve teeth. These supernumerary teeth assume two forms; either they resemble the adjoining teeth or are cone-shaped. While they rarely are exactly counterparts, every tooth can be

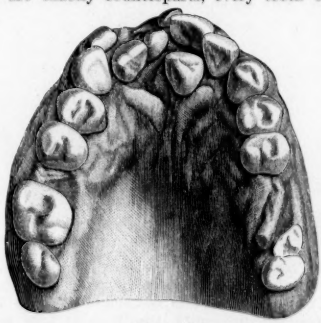


Figure 23.

and is duplicated as the following illustrations show. Figure 16 illustrates fairly well fromed duplicate central incisors; the normal incisors being outside the dental arch. They are crowded laterally by the large roots of the supernumerary incisors. Figure 17 shows an extra right lateral in a temporary set in the upper jaw; Figure 18, an extra right lateral in the permanent set. Figure 19 illustrates normally developed supernumerary cuspids which are all grouped

[6] Vertebrate Life in American Assoc. for Adv. Science, 1877.
[7] Dental Cosmos, 1894.

together upon the right side; the bicuspids being also duplicated on each side; indeed, all but the molars are duplicated. Figure 20 shows supernumerary third molars easily demarcated from the normal molars. The teeth, which fail to approximate their normal neighbors, assume the cone shape of the primitive tooth.

The fact that the cone-shaped tooth, as a rule, is perfect in construction, is found everywhere in the jaw but especially in the anterior and posterior part

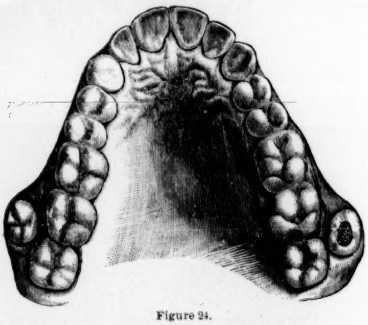


Figure 24.

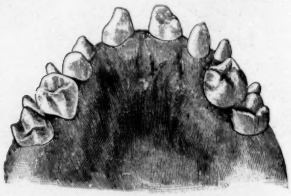


Figure 25.

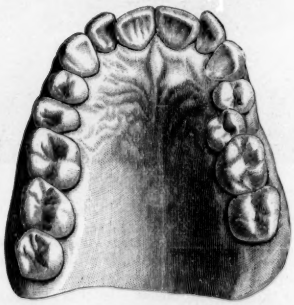


Figure 26.

of the mouth, is of much value in outlining tooth and jaw evolution especially from degeneracy aspects. The upper jaw, being an integral part of the skull and fixed, is of necessity influenced by brain and skull growth, hence degeneracy is more detectable in it than in the lower.

The evolution of the jaw is toward shortening in both directions. This shortening will continue so long as the jaw must be adjusted to a varying environment. The jaw of man having originally contained more teeth than at present, lack of adjustment to environment produces from the shortening, degeneracy of the jaw and atavism of the teeth. While this may coincide with general advances of the individual it indicates that he is not yet adjusted to his new environment. The shortening of the upper jaw causes supernumerary cone-shaped teeth to erupt in mass at the extreme ends of the jaw as shown in the following figures. Figure 21 illustrates a cone-shaped tooth between the two central incisors, forcing them

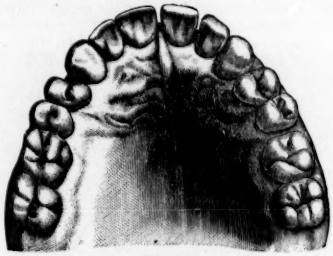


Figure 27.

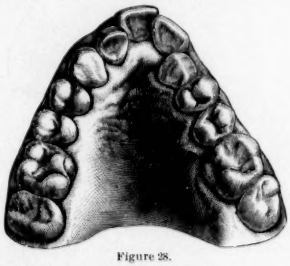


Figure 28.

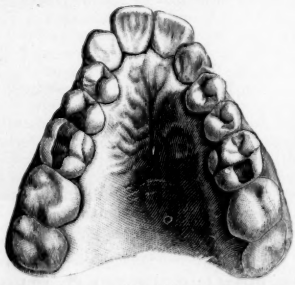


Figure 29.

out of position. Figure 22 shows three supernumerary teeth; a cone-shaped tooth between the central, lateral and cuspids out of position. The left permanent lateral is at the median line, another cone-shaped tooth remains in the vault, while the supernumerary left lateral is in place. As many as eight are at times to be observed in the anterior vault. Posteriorly these teeth are most often noticed in connection with the third molars usually on a line with other teeth, posterior to the last molar. Figure 23 shows two supernu-

merary cuspids in the anterior and two in the posterior part of the left arch; the molars have been extracted. Supernumerary teeth are not confined to these localities but may be observed at any point in the dental arch (Figs. 24 and 25). The primitive cone-shaped tooth is rarely observed in the lower jaw. In twenty-six years practice I have not seen a case. The mobility of the lower jaw prevents that mal-adjustment to environment present in the upper.

The continual shortening in both directions of the jaw causes the third molars frequently so to wedge in between the angle of the jaw and the second molar that eruption, if possible, is difficult. The third molar is often absent in the Caucasion races. In 46 per cent. of 670 patients it was missing. Frequently its development is abortive. This tooth in the struggle for existence seems destined to disappear. It is more often absent from the upper than the lower jaw. When absent or badly developed the jaw is smaller and frequently teeth irregularities, nasal stenosis, nasal

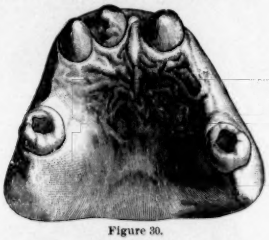


Figure 30.

bone and mucous membrane hypertrophy, adenoids and eye disorders coëxist. Figure 26 shows absence of the left third molar with irregularities of that side of the arch. In Figure 27 both third molars are seen to be missing coincident with irregularities on both sides of the arch. Anteriorly the lateral incisors are most often wanting; 14 per cent. of the laterals were wanting in 670 patients. In the progress of evolution man has lost one lateral upon each side of the mouth and the second lateral seems also destined to disappear. In Figure 28 the left lateral incisor has disappeared and in Figure 29 both lateral incisors are absent. Not infrequently does it occur that centrals, cuspids, bicuspids and even molars are absent, even their germs are not detectable. Figure 30 illustrates a cast showing three supernumeraries in the anterior part of the mouth and but two molars. The absence of teeth indicates lack of development of germs due either to heredity or defective maternal nutrition of the line of conception or during early pregnancy.

(To be continued.)

ERB'S PRIMARY MUSCULAR ATROPHY.

Read in the Section on Neurology and Medical Jurisprudence, at the Forty-seventh Annual Meeting of the American Medical Association at Atlanta, Georgia, May 5-8, 1896.

BY ELMORE S. PETTYJOHN, M.D.

MEDICAL SUPERINTENDENT ALMA SANITARIUM, ALMA, MICH.

Since Duchenne first described progressive muscular atrophy in adults and infants and regraded *each* form as of *peripheral* origin, the study of the clinical history and pathology of muscular dystrophies has only partially decided which are of muscular and which of spinal origin. We now believe that the hereditary form found during infancy and early life, especially if it attacks several members of the same family, is of muscular origin, and certainly so if there are present postmortem hypertrophied muscular fibers side by side with atrophied and degenerated fibers, and with no changes in the anterior horns of gray matter of the cord nor in the nuclei of the fourth ventricle or aqueductus sylvii.

One chief reason for considering this much talked about disease is the desire to establish a definite symptomatology, to accomplish a differential diagnosis and arrive at the rational treatment for the benefit of the patient, rather than to originate classifications.

Idiopathic muscular atrophy is primarily a disease of childhood and youth and usually develops before the age of 20. It is more frequent in males than

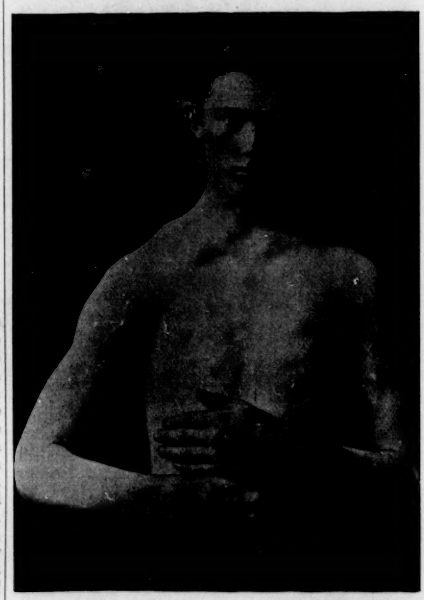


FIG. 1.—Primary muscular atrophy. Age 22. Left side shows more atrophy than right. Hands large by comparison. Right shoulder droops. Pectoral muscles wasted. Forearms unaffected. Dr. E. S. Pettyjohn. Case 1.

females, probably due to transmission through the mother, though she herself is exempt, as the son usually inherits the peculiarities of the mother and the daughter those of the father. In this way it is hereditary in three-fourths of the cases, and often appears in several members of the same family, but usually of the same type in the different members of the same family.

The onset of the disease is gradual and the atrophy and weakness progress simultaneously with or without any initial hypertrophy. In the parts affected the disease slowly increases and thence spreads. The shoulder girdle is first affected, *i. e.*, the pectorals, the trapezii, rhomboidii, latissimus dorsi, the upper arm muscles and the supinators, and later

the forearms, glutei, thighs and legs. The patient is often unaware of the wasting of these muscles on account of their relative unimportance. The deltoids are rarely involved and the serratus magnus often escapes noticeable changes.

On electrical examination the irritability of the affected muscles is usually lessened, on the use of either current and either pole, out of proportion to the atrophy present. The typical reaction of degeneration is not present; however, the action is not entirely normal. Were we to divide the *reaction of degeneration* into three stages they might be designated: Simple atrophy, atrophy with muscular cell proliferation and atrophy with muscular cirrhosis. The

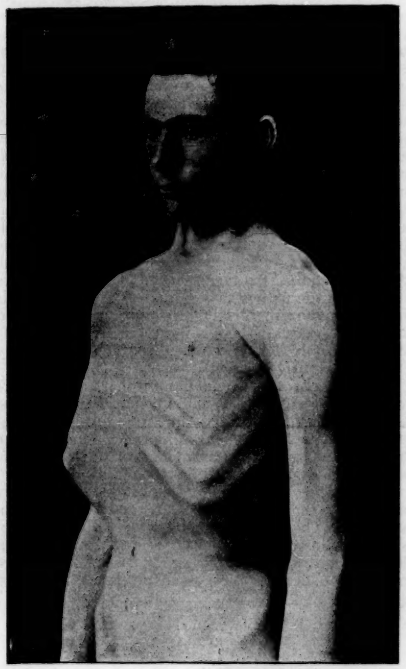


FIG. 2.—Chest expansion, nipple line 37 inches; tip of sternum 40½ inches. Intercostals unaffected. Biceps atrophied with deltoid and pectorales. (Conditions not well shown in the picture.) The scapulæ are drawn up by the trapezius and levator anguli scapulæ in absence of opposition. Dr. E. S. Pettyjohn. Case 1.

reaction found in this disease would be that of the first mentioned stage. Febrillary twitchings are absent, though not invariably, and the sensibility to the faradic current and heat and cold is usually unimpaired.

The absence of nerve irritation alone would seem to prove the atrophy to have begun in the *end organs* of the nerve, and also in the *nerve* itself. Implication of the nerve is shown by the increased action of the muscles when the electrode is placed over the motor point, as compared with the reaction obtained when placed over the muscles. The reflexes are weakened or lost, never increased. The sphincters are not affected. The disease is painless.

Aside from heredity, acute febrile diseases, especially scarlatina and diphtheria, and over-exertion, lack of good food and exposure to vicissitudes of the weather undoubtedly enter into the etiology. The course and duration (from ten to thirty years) of the disease are exceedingly variable, but can undoubtedly be influenced by treatment. Death usually occurs from some intercurrent disease.

The treatment in its prophylactic form should include the prohibition of marriage of one so afflicted,

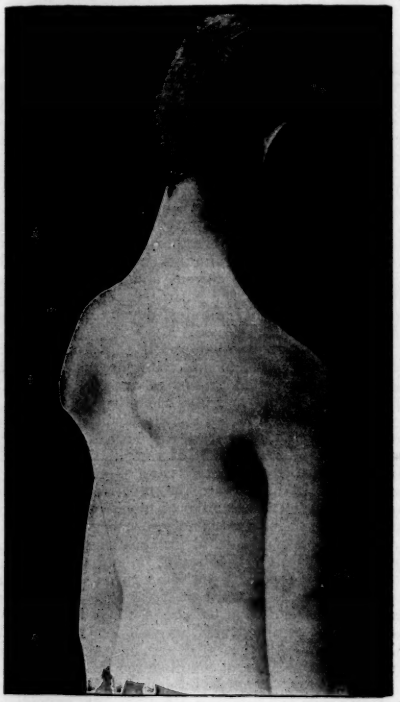


FIG. 3.—Wing-like projection of scapulæ, showing atrophy of trapezii and serrati. Drooping of right shoulder. Triceps complicated as well as the entire shoulder girdle. Age 22 years. Began at 14 years. Dr. E. S. Pettyjohn. Case 3.

and of bringing into the world other children by parents the physical *combination* of whom produced such dystrophies. Infants of such mothers should be reared by a wet nurse or by artificial feeding. All children of families where disease exists in one member, should be reared *hygienically* with every effort to increase and develop the muscles of the body symmetrically.

The active treatment should combine every useful agency to prevent nutritional deterioration of the skin, the muscles and the nerves supplying them. The cleansing of the skin and mild elimination there-

from has been shown to increase the assimilation and nutrition of the underlying muscles. Fomentations, followed by cold sprays, stimulate to greater activity the circulation of the part. Light friction continued for a considerable length of time and frequently repeated, especially with camphor liniment increases the cutaneous nutrition.

For the muscles, methodical, graduated exercise with or without apparatus (never tiring the muscle) will increase their nutrition. In addition to this, *massage*, skillfully used by the hand of an operator who understands the anatomy of the part and can *select* the various groups affected for treatment, is a most excellent aid to increasing the nutrition of the muscle. The wasted and degenerate tissue of the muscle is forced into the circulation, the blood vessels and lymphatics are emptied of the already accumulated débris and new material is brought to increase every elemental part. This treatment should be given twice daily, gradually increasing the force and time occupied. Electrization of the affected muscles and those in the immediate region, especially with the sinusoidal current, should be practiced daily. This should be done in an especial manner to every affected muscle. The current ought never to be strong nor continued until the sensibility is greatly increased. The current in use should rather be diminished than increased. One or two minutes should be allowed to each muscle, when the current should be distributed over several muscles; the entire séance lasting only from fifteen to twenty minutes, depending upon the area of the muscles affected.

The static current and alternating hot fomentations and ice to the spine, to stimulate the nerve centers supplying the affected groups of muscles, augments the innervation and increases the nutrition.

The very best internal remedy is, in my opinion, *wholesome, nourishing food*, a generous mixed diet combined with long hours of rest in bed and prolonged undisturbed sleep. Strychnia preparations combined with quinin are the best tonics. As the hemoglobin and the number of blood corpuscles are neither diminished, iron is not especially indicated.

I report a case in point: Two years ago Daniel L. presented himself at the sanitarium and gave the following history: Age 19, son of a farmer; one of seven children all in good health at the time. No neurotic heredity; father died at the age of 45, of some stomach disease; mother living, in good health. Family history good. At 9 years of age had scarlatina and made an uneventful and complete recovery.

At the age of 15 he performed a hard day's work, carrying bags and pitching bundles. No immediate effects were noticed, but a month afterward he began to notice weakness in the muscles of the chest, shoulders and arms. Some time after this these muscles began to atrophy. For the six months previous to my first observation the case had grown rapidly worse. During this time he complained of being very weak and tired after very moderate effort. While swimming his companions noticed the wing-like projection of the scapulæ. He gradually grew weaker, so he was hardly able to do milking. The family called him lazy, much to his discomfort.

On examination the entire shoulder girdle was found affected. The upper intercostals and pectorals were so weakened that the breathing was largely diaphragmatic. The expansion at the nipple line thirty-seven inches, just below the sternum forty and one-half inches. When the arms were at the side the scapulæ projected so that the two hands could be laid between them and not be seen on the line across. The trapezii, rhomboidii, latissimus dorsi, biceps and triceps were all affected, the *left side* more atrophied than the right. The forearms and hands were not noticeably changed or weakened, although the hands seemed large by contrast. He could not put either hand on the top of the head without the momentum of a swinging action for several seconds. On trying to lift him from the floor by placing the hands in the arm-pits the shoulders were raised nearly to the ears. He walked similarly to one with a lame back. The patellar reflexes were entirely absent, but there was no incoördination when standing. There were no muscular vibrations, convulsive twitchings nor momentary tremors such as are often found in progressive paralysis. The sensibility to heat, cold and cutaneous irritation were unimpaired, though the superficial temperature was slightly lowered, especially in the arms and hands. On electrical examination the irritability of the affected muscles was lessened generally, but the increased action of the muscles on both cathodal and anodal opening and closing were more marked when the electrode was placed directly over the motor point. The pupils responded to light and accommodation. The patient was not especially intelligent, his mental actions being sluggish though his judgment was firm and his emotions under control. After six months' treatment on the plans hereinbefore mentioned the patient has gained twenty-six pounds in weight; the superficial temperature of the affected muscles is normal; there is increased strength in the muscles and so far as can be discovered no atrophy in the previously unaffected parts.

A few weeks ago a younger brother, a boy of 11 years, was brought to me and upon examination was found to be afflicted in the same way, but in a lesser degree, the commencement unknown. There is true atrophy and a minimum amount of adipose tissue along with stunted growth for the child's age.

May 1, 1896, the patient has not grown especially weaker and the good fibers are increased somewhat in strength. The electric reactions and other physical signs remain about the same. His general nutrition has increased somewhat during the past year and there has been no further noticeable involvement of muscles.

GASTROSTOMY BY A CIRCULAR VALVE METHOD.

BY EMANUEL J. SENN, M.D.
INSTRUCTOR IN SURGERY, RUSH MEDICAL COLLEGE, CHICAGO.

Gastrostomy, since it was first suggested by Egeberg in 1837 and performed by Sedillot in 1849, has undergone many transformations in the evolution of technique. The primitive operations as done by Sedillot, Fenger, Foster, Durham, Langenbeck, Krönlein and Verneuil, consisted simply in making the external incision through the abdominal wall and fastening the stomach in the wound with sutures or steel needles as a support, and then incising it. There naturally was no resistance to the stomach contents, the great obstacle to gastrostomy. The operation fell into ill repute and practically lay dormant until the present decade, when it was revived and received an impetus in the modern methods of Von Hacker, Hahn, Witzel, Ssabanajew and Frank, in the hope of rectifying the

disagreeable features that are inevitable in a continual leakage of a gastric fistula. It is rather strange when we compare the great mortality attendant upon gastrostomy with that of colostomy, which is the identical operation lower down the alimentary canal, and entails little risk to life under corresponding conditions. The mortality varies according to different observers. Of 207 cases collected by Gross, 167 were for cancer and 40 for cicatricial stenosis, with a death rate of 29.47 per cent. from the operation itself. Dr. N. Senn estimates it at 25 per cent.; while Zesas is more radical than either of the other observers, and places the mor-

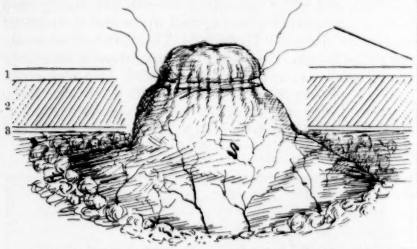


FIG. 1.—Puckering strings in situ. 1, skin; 2, muscle; 3, peritoneum; S, stomach.

tality at 60 per cent. for cicatricial stenosis and 84 per cent. for malignant cases. This great mortality is probably due in a great measure to the extreme emaciation which patients undergo before they will submit to operation. In stenosis of the rectum, both benign and malignant, we meet with the same conditions, but without such a frightful mortality. I am of the opinion that the great shock which so often follows gastrostomy is in a great degree due to the tension exerted on the rich plexuses of the sympathetic system which have such an intimate relation with the stomach. This is especially the case when

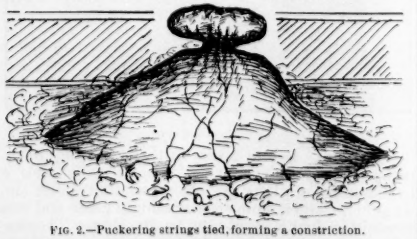


FIG. 2.—Puckering strings tied, forming a constriction.

there is considerable contraction of the stomach. Before dwelling on the subject of this paper, it will be in order to review the muscular structures of the stomach in a concise manner. The muscular coat, which here is exceedingly well developed, consists of three layers: 1, longitudinal, the most superficial; 2, circular or transverse; 3, oblique, the deepest layer. The use of the muscular fibers are: 1, adaptation of the stomach to the quantity of food; 2, to keep the stomach closed until the food is digested; 3, peristaltic movements. The contractile power of the walls in the pyloric region is the most energetic, as here more force is necessary to overcome the resistance of the pylorus. Nevertheless the stomach throughout its continuity is a powerful muscular organ and its walls tend to contract when stimulated. This phenomenon was beautifully demonstrated in the case of St. Martin, where the bulb of the thermometer was tightly grasped when placed in a gastric fistula. This natural adaptation of the stomach to its contents in the old-fashioned gastrostomy is interfered with to a certain extent by the adhesions which form between the parietal peritoneum and the stomach. It is in this area, surrounded by adhesions, that the fistula is made, being a straight incision into the stomach with no pretense of making a valve, or of devising an oblique or circuitous route. The strong adhesions to

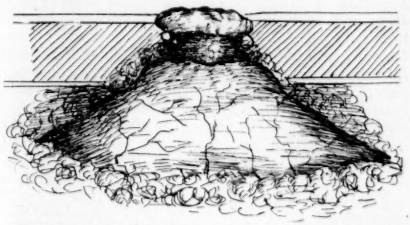


FIG. 3.—Omental cuff covering constriction and stomach sutured to abdominal wall.

the parietal wall prevented the muscular structures around the fistula to contract or dilate in conformity with the rest of the stomach, and consequently the fistula remained patent. It has been my purpose to plan a logical method of gastrostomy to meet the following indications:

1. To prevent leakage by making a valve of the stomach wall itself, instead of utilizing extrinsic structures to that end, and also for the same purpose to provide a constriction in imitation of a sphincter.

2. To minimize shock by putting the least possible strain on the stomach.

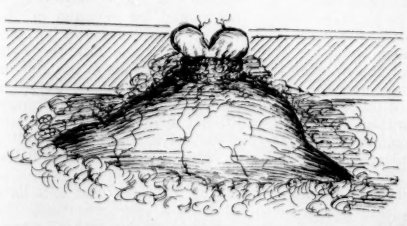


FIG. 4.—Inversion of stomach above constriction and sutured with Lembert sutures, forming a circular valve.

3. To have a fistula which remains closed during digestion and can be opened *ad libitum* for the ingestion of food.

In search of an ideal mechanism, I found a prototype in the valves of veins. These valves are, as a rule, semilunar, and allow the blood to flow in one direction; but when there is resistance they are set into action and are infallible to regurgitation. I modified the principle by making a circular valve. The operation consists of an abdominal incision of about four inches in length, and which can be made in any location deemed advisable, as no abdominal muscular structures are required for sphincter action. How-

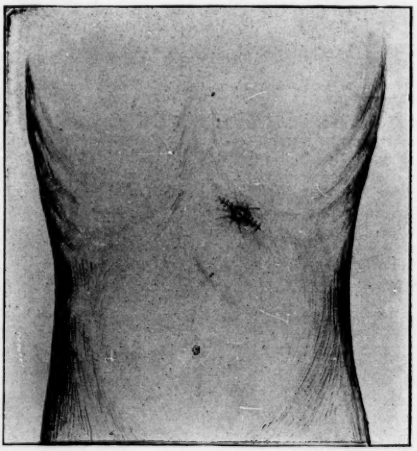
ever, Fenger's incision, which is parallel to the left costal border left of the rectus muscle, is preferable. The stomach is seized as near the great curvature as possible and a cone is formed by an assistant, who holds the apex with his fingers or a tissue forceps. Two puckering strings of heavy chromicized catgut are placed parallel to each other about two and one-half inches below the apex of the cone. These sutures include the serous and muscular coats of the stomach (see Fig. 1). These sutures are next drawn taut and tied, forming a constriction or neck (see Fig. 2). This end may also be accomplished by folding the stomach with Lembert sutures, but requires more time. Next, a portion of the gastro-colic omentum is brought up and a cuff is sutured with fine silk over the constriction (see Fig. 3). The stomach is now ready to be fastened into the parietal wound. This is done with interrupted silk sutures which include the upper portion of the omental cuff, the peritoneal and muscular coats of the stomach, and all of the abdominal wall except the skin. The rest of the abdominal wound is now closed with silkworm sutures, leaving only that portion of the stomach visible which is to form the valve. This concludes the first stage of the operation.

The second stage can be done at this time or can be deferred for forty-eight hours until adhesions have formed. This consists of an incision about one-half inch in length in the center of the portion of the stomach exposed. A rubber tube is inserted through this opening into the stomach. The stomach wall is now inverted, forming a circular valve. The inversion is secured by Lembert sutures of silk (see Fig. 4). The tube is now withdrawn and the operation is completed (see Fig. 5). If properly performed, the valve should be below the level of the external integument. The retraction is greatly favored by subsequent contraction of the wound.

This method of gastrostomy entirely obviates the possibility of regurgitation of ingesta. There are two barriers against this mishap, the constriction and the circular valve. The tendency of the constriction, or neck, is to remain contracted on account of the omento-peritoneal adhesions which surround it. It is also under the inherent control of the muscular walls of the stomach itself, as the adhesions to the abdominal wall are above this point. This constriction, in all probability, would be sufficient to control regurgitation; but as an additional safeguard, stress is laid on the value of the circular valve, which is invincible to all passage of fluids from the stomach externally. The importance of the omental cuff is twofold, in that it aids the maintenance of the neck and acts as a plastic substance to fill in the spaces between the folds formed by the puckering strings, making a continuous surface for suture to the abdominal wall.

Following is the report of a case in which the circular valve method was used with most excellent results:

Mr. M. R. consulted me Aug. 26, 1896, for stenosis of the esophagus. Age 48 years, married; family history negative. He first became aware of difficult deglutition some six months before. This gradually became more marked until he had to subsist entirely upon liquid diet. Fifteen days before the patient came into my hands, the stenosis became complete. The patient was emaciated almost to a skeleton, and presented that cachexia so pathognomonic of malignant disease. He lost approximately sixty pounds in weight. Upon examination of the esophagus, I found the pathologic lesion at the cardiac end of the stomach. With careful manipulation, I was enabled to pass the smallest-sized olive-pointed bougie into the stomach. There were apparently two points of stenosis about an inch apart. The bougie would become engaged in the upper one, then become free, and finally pass through the lower one into the stomach. After exploration there was no bleeding whatever; nor did the patient ever have any hemorrhage. The diagnosis was conclusive of carcinoma of the cardiac end of the stomach, especially with the aid of the clinical history. I suggested gastrostomy as a palliative measure, and after consultation with his family and friends an operation was agreed upon and the patient sent to St. Joseph's Hospital. The man was so weak, the pulse being only 46, that an operation at this time would most certainly have been fatal. He was given 1-30 gr. of strychnin hypodermatically every three hours and enemata of milk, beaten eggs and whisky, until August 31, at which time he became somewhat stronger.



Operation completed.

Operation: Before taken to the operating room, patient was given an enema of black coffee, also a hypodermic of 1-30 gr. of strychnin. Pulse 56. Anesthetic, ether, which was sparingly given and was administered with great care by Dr. Homer Thomas.

Fenger's incision was made. The abdominal wall was unusually thin. Immediately after opening the abdomen the stomach presented itself, which I found very much contracted. I passed my hand along the great curvature up to the cardiac end, where I felt a hard nodulated mass, which confirmed the diagnosis. The point selected for the gastrostomy was at the greater curvature, and as near the cardiac end as possible without putting tension on the organ. The first stage of the operation was completed in the manner I described before. During the operation, which took twenty minutes, the patient gave evidences of shock and the pulse became almost imperceptible; but he was revived with hypodermics of whisky and external heat. I decided to defer the second stage of the operation, that of mak-

ing the fistula, for thirty-six hours, until firm adhesions had formed. After reaching his bed, the patient rallied. Temperature 99.2; pulse 82. The patient did well until the evening of September 2, when the temperature rose to 101.8; pulse 120. He also coughed considerably. Upon examination of the chest, I found that lobular pneumonia was present, a complication which is very frequent after gastrostomy. I concluded that procrastination in doing the second stage of the operation would be dangerous. The patient was so debilitated that no anesthetic could be given, nor was it deemed advisable to remove the patient to the operating room; so I completed the operation upon the patient in his bed. Four ounces of peptonized milk was then introduced through the tube. This was continued, with the addition of one ounce of whisky every three hours. The pneumonia gradually left and the patient grew stronger. Ten days after the operation he was able to sit up and he left the hospital after three weeks, although the disease was pursuing its relentless course.

Remarks: After each feeding the tube was removed, and at no time was there the least leakage from the fistula. The valve was easily opened with slight pressure of the tube, as was also the constriction. Upon withdrawal of the tube, the valve would close with the precision of a trap-door. I put the valve to the crucial test, by filling the stomach with milk and having the patient cough violently, and shifted him in every possible position to favor leakage; but the valve remained true to its purpose and there was not a vestige of regurgitation, a positive clinical demonstration. The wound contracted so that the mouth of the fistula was the only portion of the stomach exposed.

Note.—Since the preparation of this paper, I find in the *New York Medical Journal* of Nov. 7, 1896, that Dr. Willy Meyer describes a modification of Witzel's operation devised by Dr. Bronislaw Kader, assistant in the surgical clinic of Professor Mikulicz of Breslau. In this operation the stomach is inverted in the manner I describe, except that the inversion is carried to a greater degree by making two rows of Lembert sutures, instead of one; the principle being to form a canal of serous tissue. The rectus muscle is bluntly divided as in the Von Hacker operation, in order to be utilized for sphincter action.

31 Washington Street.

LITHOLAPAXY; SUCCESSFUL REMOVAL, FROM THE BLADDER OF A MAN 30 YEARS OLD, OF A WILLOW TWIG 7 INCHES LONG, WITH HEAVY INCRUSTATION OF CALCIUM PHOSPHATE.

BY W. S. FORBES, M.D.

PROFESSOR OF ANATOMY, JEFFERSON MEDICAL COLLEGE; CLINICAL SURGEON TO JEFFERSON MEDICAL COLLEGE HOSPITAL. PHILADELPHIA.

In the month of September, 1895, I was called in consultation in Johnstown by Dr. A. N. Wakefield and Dr. F. Shill, to see a man about 30 years of age, who stated that he had gravel. The man showed us a small piece of willow twig, half an inch long and about the thickness of an ordinary match, incrusted for half its length with phosphate of lime making the mass one-quarter of an inch in diameter. He had passed this piece of twig from his bladder within a week, also two smaller pieces during the month of January last. He said that in November, 1895, he had shoved up in his urethra a long piece of willow twig and that it had accidently broken off at the head of his penis. As is usually the case with foreign bodies in the urethra, this willow twig had been carried by muscular action back into the bladder. The man was in a good deal of pain and could not lie down without increasing it very much. He could not retain his water longer than an hour. He had had three hemorrhages from his bladder within three weeks, and the last one was so extensive as to frighten him. On sounding his bladder the characteristic "click" was readily obtained. The "click" was observed on the right side as well as on the left side of the bladder. From examination, we concluded that the twig arched over from the right to the left side, the top of the arch being at the summit of the bladder. In consultation it was decided that I should attempt to remove the mass by crushing the lime incrustation with a lithotrite, and as far as possible to reduce the twig so as to remove the entire mass by the evacuator. If this proved impossible it was agreed that I should perform suprapubic cystotomy.

On September 4, in the presence of Dr. Wakefield, Dr. Shill, Dr. Lowman and his son, Dr. John B. Lowman, and other medical gentlemen in Johnstown, the patient was placed under ether by Dr. Wagoner, Dr. John B. Lowman assisting. It was observed that the foreign body had not moved from its previous position. I introduced my lithotrite, a No. 18 F,[1] and readily crushed the incrustation. By screwing down the male blade it entirely severed the encased twig, which was easily cut across. The crushing of the incrustation imparted a very different sensation to my hands from that of cutting the body of the twig. After performing this cutting and crushing for several minutes, the lithotrite was removed, and introducing a No. 25 F. canula, the evacuator drew out quite an amount of broken pieces of incrustations and a number of pieces of the twig. The operation was continued for forty-eight minutes, the bladder being washed out with a warm borated solution. The incrustations and the pieces of the twig weighed 184 grams. The pieces of twig placed end to end, by Dr. Wagoner, measured seven inches in length. The man had no untoward symptoms, was up and about in five days and went home well in ten days.

The action of the new lithotrite was everything that could be desired. Unlike the older lithotrites the present instrument holds in its grasp and then divides into pieces instead of only mashing. I described this lithotrite in a paper read before the American Surgical Association, at the meeting held in Washington June 1, 1894, and published in their proceedings, and also in the *Medical News*, June 23, 1894.

I have now performed twenty-one operations (lithotapaxies) with this new instrument. The ages of my patients ranged from a child of 4 years to an old man of 82. Of these twenty-one operations, my first lithotapaxies, eighteen are now living and well. The three deaths were occasioned by debility and suppression. They were aged respectively 58, 66 and 74 years. In the case of the man 74 years of age, perhaps it would have been well not to have operated at all, as his debilitated condition (from alcoholism), I told him, would probably prevent his recovery, but as

[1] Recently, six Forbes' improved new lithotrites were sent to Canton, China, through the Board of Foreign Missions. They were in size Nos. 33, 30, 27, 23, 18 and 15, French. The No. 30 was tested in the testing machine to 680 pounds and remained uninjured.

his sufferings were extreme and as there was some hope for him in the operation, I concluded to extend it to him, as he wished.

In these twenty-one cases of litholapaxy, seven of them were operated upon without ether, the bladder having been injected with four ounces of an 8 per cent. solution of cocain just before each operation. In every case a warm borated solution was used both during and after the operation.

The smallest stone weighed 90 grains, the largest 640 grains.

Mr. Gilbert Barling, F.R.C.S., surgeon to the Birmingham Hospital, England, in the *British Medical Journal* of May 5, 1894, gives the following tables as to the comparative mortality of the three operations, suprapubic lithotomy, perineal lithotomy and litholapaxy, in male cases under 20 years of age. This table presents the result of the practice for five years, 1888 to 1892 inclusive, in six provincial and six London hospitals, the majority being medical schools.

Suprapubic Lithotomy (males).

Under 10 years.			10 to 20 years.		
Cases.	Recovered.	Died.	Cases.	Recovered.	Died.
44	34	10	28	23	5

Total under 20, 72 cases with 15 deaths. Deducting 3 deaths, this leaves 69 cases with 12 deaths, a mortality of 17.4 per cent. The reason for this deduction is given in the text.

Lateral Lithotomy.

Under 10 years.			10 to 20 years.		
Cases.	Recovered.	Died.	Cases.	Recovered.	Died.
39	37	2	20	20	0

Total under 20, 59 cases with 2 deaths. Add one death from suprapubic operation after uncompleted lateral, making 60 cases with 3 deaths, a mortality of 5 per cent.

Litholapaxy (males).

Under 10 years.			10 to 20 years.		
Cases.	Recovered.	Died.	Cases.	Recovered.	Died.
43	42	1	16	16	0

Total under 20, 59 cases with 1 death. Add 2 deaths from suprapubic operation after uncompleted litholapaxy, making 61 cases with 3 deaths, a mortality of 4.92 per cent.

It is manifest from this very carefully prepared table that the rate of mortality in suprapubic lithotomy in young males is much higher than that following perineal lithotomy and litholapaxy in this class of cases. And this opinion has since been confirmed by the recorded practice of Indian, British and American surgeons generally.

Surgeon P. J. Freyer of the Bengal Army, India, states in the last edition, 1896, of his most excellent essay on the "Modern Treatment of Stone in the Bladder," that in the government hospitals of Punjab and Bambay alone there were 7,694 litholapaxies performed on patients of all ages in four years, 1891-94, with 255 deaths, or a mortality of 3.45 per cent.

In view of this experience, litholapaxy is no longer on trial. It is now a firmly established practice and destined to replace all forms of lithotomy, save in very exceptional cases.

"By litholapaxy," writes Freyer, "the surgery of the bladder has been truly revolutionized. The surgeon who would give his patients suffering from stone in the bladder the best prospect of recovery must practice litholapaxy and, I confidently anticipate," adds this experienced and able surgeon, "that with increased perfection in the instruments employed, larger calculi than any hitherto attacked will successfully yield to the operation."

901 Pine Street.

PISTOL SHOT WOUND OF ABDOMEN; WITH RECOVERY.

BY A. E. SCOFIELD, M.D.
TILDEN, NEB.

July 24, 1896, I was called into the country to see a 14 year old German boy, accidentally shot in abdomen with a pistol from a distance of 8 feet. He was quite weak; not much pain unless by pressure, and some dullness over lower abdomen; had vomited twice, temperature 97.5 degrees, pulse 85. The ball had entered 2½ inches from umbilicus at a point 1½ inches below a line from umbilicus to the anterior-superior spine of ileum. The sanitary conditions were most unfavorable, the family temporarily living in a 10 by 10 feet granary, with a dirty hen house attached.

I informed the family an operation would be imperative and had an abundance of water boiled and returned to my office for assistance, instruments and dressings. Being unable to obtain surgical help I invoked the aid of two non-professionals and returned, put the boy on a table out of door and prepared him for the operation. Chloroform was given. I made a 2¾ inch incision at site of wound. No vessels required ligation and no positive evidence that ball had entered cavity until peritoneum was reached. On opening the same about 1½ pints of blood was found in peritoneal cavity, most of which was removed and nine holes were found in gut: lower jejunum and ileum. These were repaired by the Czerny-Lembert suture, with pure silk; the folding in corresponded lengthwise with the long axis of the gut. No holes were found through the mesentery. Considerable time was consumed searching for injured viscera and twice the pulse became imperceptible, but regained nicely by injecting very warm salines in the rectum. Large amount of the same was used in flushing the peritoneal cavity. After the rents in intestines were repaired, two rows of chromicized ligatures were put in to close incision, dressings applied and boy placed on a cot in the house and strychnia given hypodermically. Temperature was three degrees below normal and very much exhausted. Nothing was seen of the bullet, which was a 22 caliber, and as an odd number of perforations was made the supposition was it had lodged in lumen of the gut and would pass, but was not discovered in feces, though sufficient vigilance was used in the search. That night he was quite restless and vomited twice. Next day he vomited once, but was quite comfortable for the balance of the time. Recovery was complete in two weeks, when he was up and out.

Despite the filthy surroundings, his temperature kept below 100 degrees and there was absolutely no unfavorable symptoms during his convalescence. Tinct. opii deod. was given when required to quiet, but with extreme care not to prevent the absorbent power of the peritoneum, which does so much for the abdominal surgeon. Sulph. magnesia was also given in small doses after twenty-four hours and continued until motion of bowels, which was secured by the assistance of an enema of the same in solution.

ABOUT FEVER; REFERRING TO NATURAL ECONOMICS.

BY WILLIAM S. STOAKLEY, M.D.
MILLBORO SPRINGS, VA.

The stress which is laid on the hyperthermic condition which nature shows in her attempt to restore the "normal status of affairs" when she is aflame, as the leading symptom to be speedily suppressed by us, is, in my humble opinion, carried something to the extreme.

Fever is a signal to us that nature is offended, consequently perturbed, and she takes this course to relieve herself of the offenders. If it is only a symptom, it should not draw our attention too far from the cause, which latter, if we can remedy, will lower the temperature as a matter of course. This hyperpyrexic mobilization, then, is nature's way to get rid of her troubles; and we are induced to believe that the morbific elementaries are either destroyed or rendered *hors du combat* by this, we think, inhibitory action, when aided in the proper direction by art. How many gastric fermentative fevers ("upset stomachs") get well without remedies, through nature's modes. General practitioners can not tell the material characteristics of the microörganism that produces the fever; but give them the case, and they can approximate the diagnosis as to whether it be of the fermentative or putrescent type. Along with the temperature there are certain "inexplicable pointers" (derivatives of experience) taught clinicians as to its significancy; and the call for remedies as well.

Remedial theory can be spun into *dulce* and "catchy" shapes far from the sick-room. We admire such perhaps no less, only the bedside indications more. Our imaginations may be persuaded adverse to legitimate procedure in making us believe that certain diseases fit such and such drugs. We can not see it in that light. The converse of this should obtain. The "foot should not be fitted to the shoe," because it is not in accord with natural economics.

If this theory is not "hewed to the lines" of natural dictation, it is minus the *utile*, and practical, which latter is exactly what we are trying to get at when we don the "medical harness;" and get at it, too, from every legitimate source, with the freedom of all the sciences as integral aids to the accomplishment of a practical end.

As an illustration of one branch in our aid, note the close connection with meteorology.

Let us "make haste slowly," and surely as we can. There are many ways to accomplish our athermic object; none like the natural way. It may be well not to go at this fever with preconceived ideas that to cure the disease it must be hastily controlled, blind to other equally prominent points. We may obtund nature, and shut up in the system what should be eliminated as effete and offensive.

Doubtless you ask right here: "Must we not lower this high temperature?"

Most assuredly we should, and in an humble way I am attempting to give my idea about it.

The manner of doing this is a point in successful practice worthy of study. The compositeness of the grand harmonic "human machine" must be taken into consideration in this matter, and the laws of compensation likewise; never forgetting the controlling power the nerves have over the "driving wheel."

Should we handle them too harshly when perturbed, we bewilder the directors along our pathway; beside, "the machine" will have no mode of intercommunication with its several parts. Obtunded nature will not answer to the "fuel in getting up steam" again; thus a stasis is apt to occur as the result.

Yes, we should endeavor to get the temperature to the normal point, but not by too heavy a blow upon the nerves. We may attempt it indirectly by freeing the "escape valves" (emunctories), with an eye to compensation. This relief they will answer with a refreshing nap, a good warm sweat, and on awaking a big urination also not infrequently will occur. Just here "the madam" (Dame Nature) will smile upon us.

To establish a chain of reliefs is what we are "driving at" and what the nerves call for, and what will lower the temperature by normal stages, and draw the smile above noted.

This one symptom of fever may be made up of a combination of other symptoms, some of them of more import to us to look after than the high temperature. The most obstinate of all cases are those with less prominent temperature. Every physician knows that, as a rule, the gravity in pneumonia is proportioned to the lack of thermic indications. Witness those old cold, sweaty fevers, on and in the vicinity of rice plantations. Here, fever is not much of a symptom, but the want of it is. Indeed, there are some "ugly" and "scarey" presentments made to us in adynamic fevers when the nerves have been overwhelmed, and through them the heart, right in the start, and the case is "dead all over" because the "big wheel won't go." We attach fault to this latter organ (the heart) sometimes wrongly, and "whip it up" with strophanthus and other drugs, when really we have failed to clear the life-giving stream by looking to our "safety valves;" and this because so much of our attention was centered on "smothering" the morbific elementaries (noso-germs) in their "hollows." This way is all right and proper so far as it goes, and all of us believe in this mode of medication; still, we must look to the dictates of the *vis naturæ* first, especially so when these are made with such emphasis.

Modern medicine is an illustration of "history repeating itself" in some ways, notably in the treatment of typhoid fever with alterative doses of mercurous mild chlorid; and successfully, too. The late adjuvants which we owe to our never-tiring chemists have given us an impetus in the right direction, and doubtless with them in the near future we shall overturn many of the old plans of procedure, and extract from them at some time whatever points of value they may possess.

The power of this organ (the heart), which of late has been giving us so much trouble, we must remember is derived from a chain of interacting connectives, each dependent on another. The cause of this trouble opens a field for study, inasmuch as the affection is of such frequent occurrence now, compared with its rarity in time back.

When we take into consideration the interdependence of every link in the chain of our existence, it is patent that we should conserve with no partiality. There is hope in unison if it be only feebly expressed.

To sum up and conclude: It is not intended to condemn any other plan of lowering the temperature in fever, that this is written; only to advocate one which experience has shown to be a good one, and well-pleasing to the economy.

THE DOCTORATE ADDRESS DELIVERED AT THE COMMENCEMENT OF THE ILLINOIS MEDICAL COLLEGE.

BY SETH SCOTT BISHOP, M.D., LL.D.

Professor of Diseases of the Nose, Throat and Ear; Professor of Otology in the Post-Graduate Medical School and Hospital; Surgeon to the Illinois Charitable Eye and Ear Infirmary, etc.

Members of the Graduating Class: In conferring the degree of Doctor of Medicine upon you to-day, the honor and privileges conveyed with the title are not likely to be underestimated or forgotten. But you should be reminded that in accepting the privileges of physicians, you assume at the same time duties of the gravest nature. Your relations to the members of the community who will entrust themselves to your care are changed. Such relations become as sacred and inviolable as those existing between priest and parishioner—between lawyer and client. Your duties will involve an intimate knowledge of their affairs, their habits and their characters, such as no other professional relation in life conveys.

Our laws recognize, protect and dignify this high position which is maintained by every honorable physician. In the safety vaults of your memories will be treasured those confidences and secrets that are poured, confession-like, into every Doctor's willing or unwilling ears. In your power may rest the integrity and the happiness of families, the destiny of citizens and the sanitary welfare and safety of communities.

Let your influence protect the home and the family. Let your force of character encourage and uplift the fallen victims of disease and despair. Let your superior knowledge, skill and judgment protect the community from the devastating contagion of epidemics.

Modern medicine has increased your power for good many fold over that of your ancestors. It is truly a great privilege to practice medicine in the closing years of the nineteenth century. We possess a mastery of medicine not dreamed of by our plodding forefathers. The refinements of diagnosis made possible by the microscope, and the improved processes of the laboratories of chemistry and bacteriology; the prevention of diseases and their spread by vaccination and the antitoxins; the concentration of drugs and the extraction of their alkaloid principles, united with the palatable and elegant products of advanced pharmacy; the various adaptations of electricity to the service of medicine, with the Roentgen ray accomplishing the seemingly impossible; the economic division of labor, typified in the various specialties of medicine, permitting and enforcing the highest degree of perfection in every branch of medical achievement, place the advancing science and art of modern medicine above all others of vital importance to the well-being and the life of mankind.

No sphere of human activity excells the achievements of the coördinate sciences of medicine, and the brilliant accomplishments of surgery; and we may be permitted to indulge a pardonable pride in the part played by members of our own local profession in the great scientific drama of our day.

Let these truths broaden your views and stimulate you to put forth your best endeavors to achieve the highest ideals of attainment. Be not content to drone your lives away like tow-path mules of medicine. Rise above mediocrity. Strive to out-strip all runners in the race. With every nerve and muscle tense, leap forward to the goal.

Above all things, be studious. Be the first to know each new discovery. An ignorant doctor is an unpardonable sin. Doctor means learned. You should be learned above all your neighbors. You should be looked to as a leader in your community. You should diversify your learning beyond the confines of medicine, and to broaden your culture, you should strive to excel in some important branch of learning. If you live in a mining country, let geology occupy your leisure hours, for they will not be few in the first years of practice. Geology and mineralogy may lead you to a mine of wealth.

The profession and the people would profit alike if the able physicians of America, like the brilliant professors of foreign lands, of whom the erudite Virchow is an illustrious example, would engage in the study and actual practice of political economy. The philosophy of good government is a subject worthy of the work of the best minds a great country can produce. In such lands as Germany, Italy and the South American Republics, physicians of culture honor themselves and their profession in the highest councils of their governments.

When will the people of America awaken to their own most vital interests, and dedicate a government bureau, with a medical head, to the cause of disease-prevention, State medicine and higher education? We are blessed with a department of agriculture that predicts the weather; a department of war that relieves us of our surplus millions; a department of law that really fights the nation's battles. The time must come when State medicine shall be represented in the National government, to protect against invasions of contagious diseases and to safe-guard the nation's health in every quarter. Our local profession contains within its ranks the ability and the experience to organize, equip and properly conduct such a department of State.

Not until the government of the United States recognizes the vast possibilities of State medicine to conserve the health and vigor of the nation, and to save the great waste of human life that modern scientific research has rendered preventable, can it lay claim to being abreast of the times and the first of the nations of the earth.

It has been the custom in the past to say to graduating classes: "Your school days are ended. You now enter upon a life of activity, a career of usefulness," etc., but in these days of post-graduate schools, in which a college education can be supplemented by actual experience in the practice of medicine, your schooling should not end with a blue ribbon and a sheepskin. Time was, when no physician was considered to have been initiated into the highest degrees of proficiency until he had crossed the Atlantic and walked the wards of the Old-world hospitals.

The conditions are changed. American teachers of to-day stand abreast of the world. These are not idle claims. They are not only verified by Americans conversant with European teaching and practice, but are substantiated to the satisfaction of European scientists who visit our schools, laboratories and hospitals. It is evident, then, that you may enjoy the advantages offered by home institutions of learning to perfect yourselves in post-graduate work with far less loss of time and money than it cost your predecessors. But travel enlarges the views, expands the intellectual horizon and broadens culture. Visits to foreign countries lend polish to the manners, evoke the spirit of tolerance and stifle bigotry. The diversified teach-

ings of Old-world medical centers will arm you with those principles and methods that contribute to a finished education and a successful practice.

Therefore, let those who have walked the beaten path you are to tread exhort you to cap the climax of a collegiate course with the practical knowledge and skill obtainable under the direction of eminent specialists in hospital and dispensary practice, first at home, and afterward abroad.

It is appropriate at this time to tone down the roseate hues of your imaginative pictures of the future, with the neutral tints of reality.

'Tis pleasant, sure, to think you'll own a mint;
A mint's a mint, although there's nothing in't.

A diploma is not a lien on the public for a living. That pretty and attractive sign you have in mind, with the big M.D., in shining letters of gold, or of glittering silver, is not an unfailing magnet to draw the masses of suffering humanity into your health-giving presence. The fund of knowledge you have stored within the temple of the mind will not find quick appreciation and admiration. Then let the truth be spoken, and faced without flinching.

You now set sail under the smiles of heaven and the plaudits of teachers and friends. Good wishes and flowers illuminate your pleasant pathway; but no bouquets of rhetoric can screen you from the harassing storms or the dangerous breakers ahead. Your schooling, good sense and self-reliance must sustain you in the time of need.

We speak from experience when we predict that you will meet with that wise old doctor who will welcome you with a machine-made cordiality to the precincts of his practice. He has gone through the same formality many times before, and recalls the ghosts of practice abandoned by the little army of doctors who have pitched their tents in his door-yard, spent their little all, and moved on to new fields, a little wiser than before. This grizzled veteran, who can not boast like you of a real parchment and ribbon, owns the community in which he lives. Sooner or later this fact dawns upon your mind. He magnanimously promises you all his night work—that does not pay. He will help you out of your hard cases. He does. He helps you out of your cases, your fees and your patrons. This great-hearted individual volunteers to teach you how to make money while you appear to be sacrificing yourself for the benefit of the poor public. He tells you how you should charge less, and make many more visits; how you should ape the artful dentist who makes holes to fill, when he can not find them ready-made. He is a devotee of the black art. Beware of this Mephistopheles of medicine.

Another neighbor, you will meet, grown fat and sleek, who casts a withering glance as you pass by. You, poor novice, are an intruder; but you have heard that it is your duty, being new, to call on him. You honor tradition. He receives you with a fraction of a nod, a blighting look and a condescending wave of the hand toward his most uncomfortable chair. You inform him that you have come to—— "Ah," he has heard of it—"bad place to locate; next town would be better; here, it is every man for himself, and ——" and so forth. Are you discomfited, discouraged? No; you know your preceptors have been through the same mill, and still they live. You are a little stirred in the depths of your soul, but every fiber of your being vows that eternal success shall crown your life.

Undaunted, you make another sally. You visit the brother of your neighbor, less fat and sleek, but beneath his more careless exterior he reveals unconsciously a soul of truth and honor. His sympathetic words of cheer and sound advice anchor in your heart. He stands like an oasis in a desert, like a cross of hope, and you linger in his presence and cling to his personality. You feel him worthy of your fraternal love; no trust is violated and no confidence is betrayed. With a mind well stored with medical lore; with a wealth of the richest professional experience; with a broad philanthropy that the world has blessed with material abundance, this noble son of the healing art rescues the name of physician from the selfish and sordid estate to which the unworthy would drag it, and adorns it with the transcendent glory of a great manhood.

These three types of medical men, and more, you will meet. You will have no quarrel with any. You will cultivate the society and friendship of your equals and, perhaps of your betters. You will be guided by the principles of the immortal Hippocrates and the code of ethics of the AMERICAN MEDICAL ASSOCIATION.

With homeopaths and eclectics you will have an honest, but good-natured difference. Life is too short, and charity is too broad to permit of bickerings. Be generous enough to credit every competitor with sincerity, as you would be credited. Remember our laws, to which we all are alike amenable. Your privileges and theirs are identical, and their respect and friendship are worth many times their hate.

To your patients be true. Their interest and yours are one, for the greater good you do to them, the more success it will reflect on you. In the alleviation of suffering you will derive much satisfaction; in the conquering of disease you will delight. Commit one robbery at every opportunity—rob Death of his prey. While you may not be able to realize for this service a fee commensurate with the law's estimate of the value of a human life—$5,000—you will enjoy the consciousness of having rendered a fellow-being an inestimable service, and of having fulfilled the utmost requirements of a most exacting profession.

Adopt correct business methods. Whether you practice general medicine, or confine yourselves to a specialty, especially obstetrics, let your rule be "cash on delivery."

Finally, your personal influence over the sick and dying may turn tears into smiles, and darkness into light. The attributes of the true physician, united with an inspiring Christian character, present an ideal type of manhood and useful citizenship. Such a physician instills the dew of courage into the drooping soul; refreshes the withering heart with rainbows of promise, and paves the pathway of the dying with the peaceful flowers of hope.

SOCIETY PROCEEDINGS.

Medical and Chirurgical Faculty of Maryland.

Semi-annual Meeting held at Hagerstown, Md., Tuesday and Wednesday, Nov. 10 and 11, 1896.

FIRST DAY—TUESDAY, NOVEMBER 10.

Dr. WILLIAM OSLER, President, in the Chair. Dr. JOHN S. FULTON, Secretary.

After an address of welcome by Dr. J. W. Humrichouse of Hagerstown, which was responded to by Dr. Wm. Osler of Baltimore, the regular order of business began.

CONTINUED FEVERS.

This was the subject of a paper by Dr. C. BIRNIE of Taney-

town, Md. He related several cases of fever lasting from two to six weeks, or sometimes longer, lacking the characteristic symptoms or lesions of typhoid or malarial fever and not due to any definite lesion. He gave the points of distinction between the two cases related and typhoid fever. In many instances he treated the patients symptomatically. He finds that antipyretics were useless and harmful. Phenacetin is very successful in his hands.

Dr. JOHN C. HEMMETER asked what were the latest views concerning gastric fever; some persist that such fevers do exist and others that they do not.

Dr. BIRNIE said that no microscopic examination had been made in these cases and he was of the opinion that gastric fever was more of a gastric catarrh.

Dr. OSLER said that he had no personal knowledge of gastric fever.

Dr. CHAS. M. ELLIS of Elkton, has had similar experience as that related by Dr. Birnie.

Dr. A. S. MASON of Hagerstown, said that such cases as those related by Dr. Birnie were known to physicians and he was inclined to call them continued fevers. In some cases quinin had no effect at all. He referred to an epidemic that spread over this country twelve years ago, he had sixty or seventy cases, and typhoid cases from polluted water, but also many cases with no local disturbance. He did not know the classification of these fevers.

Dr. GEORGE J. PRESTON said that the subject of continued fevers was of great practical importance and spoke of the physiology of heat and cold production on fevers. We do not give due weight to the physiologic questions in the study of this fever. We often have distinct hysteric fever running over weeks; these are rare cases, but they do occur. We rarely see these cases in the hospital, because these mild cases do not enter the hospital as a rule. We do have certain cases in typhoid fever, such as walking typhoid fever, which is made known by the relapse. The enlargement of the spleen and liver are not diagnosed. The diazo-reaction has not met with much success in his hands. There are many cases of fever in which quinin is of no use.

THE NATURE AND TREATMENT OF GASTRIC ACIDITY.

This was the subject of a paper by Dr. JOHN C. HEMMETER. He asked if there was a distinct lesion in these troubles or not; that had been the question often asked. Not arriving at conclusions, he examined the gastric contents after double test meal of Salzer. In these two consecutive meals representing an ordinary diet one can determine the number of important pathologic states in gastric digestion almost without further analyses. These test meals consist, first of a cup of milk and a plate of rice with a piece of bread, followed four hours later by a roll and a glass of water. If the stomach contents be removed one hour after the second meal there should be no remnants if the stomach is healthy. Proteid remnants, such as meat and eggs would point to an acidity, while a hyperacidity would be indicated by a large amount of carbo-hydrates in the remnants. After some few words on the digesting power of the stomach, he concluded by some important directions on the dietetic treatment of this trouble.

Dr. GEORGE J. PRESTON read a paper on

CEREBRAL SYPHILIS.

The symptoms of this trouble are very varied and the history of the primary lesion is often uncertain. Moreover, the interval between the primary lesion and the brain trouble may be so long as to make the connection between the two uncertain. Meningitis from syphilis is nearly always chronic, the symptoms coming on gradually, the first one being headache, then there may be paralysis of the third pair of nerves, or the fourth or sixth, then there may be hemianopsia. The most common form is great mental depression, or rather apathy. He related six typical cases illustrating some of the most important symptoms of cerebral syphilis. We should make our diagnosis and then treat vigorously. This method of treatment is much more used in this country than in Europe, hence the better results obtained here. He has given as much as 300 to 500 grains of iodid of potash a day, and we are justified in doing this. He thinks that mercury very materially helps the iodid.

Dr. E. N. BRUSH thinks that the interval between primary lesion and the brain troubles is much longer than Dr. Preston intimated in his paper. In one case he has given 900 grains of iodid of potash a day. He does not believe in the therapeutic test and does not think that because a patient can take large doses of the iodid that it should be treated as specific: some syphilitics can not take large doses while those who have never had the disease can often stand very large doses.

Dr. JOHN WHITRIDGE WILLIAMS read a paper on

MALARIA COMPLICATING GYNECOLOGIC OPERATIONS.

He spoke of the importance of examining the blood in all febrile conditions, and the necessity for great accuracy and said that post-partum fever was more frequently attributed to puerperal fever than to malarial fever and that there were few references to malarial post-partum in the text-books. He had had two cases recently. In the first the examination of the blood had given him great confidence and had allowed him to exclude sepsis. In the second case neglect of the blood examination had resulted in a faulty diagnosis, and as a consequence an operation was performed, although as it turned out, this operation was entirely justifiable. These two cases convinced him of the importance of blood examination in all febrile cases after labor, even though malaria be suspected. He is confident that malarial fever is often mistaken and treated for other post-partum fevers.

Dr. J. M. HUNDLEY said that he had several cases of late in which malaria complicated gynecologic operations, and the blood examination had made the diagnosis certain. He thought that this year especially, such malarial complications were more common.

THE CYSTOSCOPE IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE FEMALE BLADDER.

This was the subject of a paper by Dr. J. M. HUNDLEY. Heretofore the treatment of these diseases has been unsatisfactory. Drugs internally and washing out the bladder were the two methods of treatment used. Through the skill of Dr. H. A. Kelly, the modern cystoscope has been so perfected that the interior of the bladder may be examined and treated and the openings of the ureters may be seen. The bladder is more frequently subject to organic disease than was previously believed before the use of the cystoscope. Not only uterine, but also rectal diseases cause an irritable bladder. He thought that the routine examination of the bladder with the cystoscope should be made in every gynecologic case, whether the complaint was referred to that organ or not. He related two cases attesting the value of the cystoscope in his line of work and urged the profession not to neglect this modern means of diagnosis.

Dr. A. C. WENTZ of Hanover, Pa., related a case in which he applied ichthyol ointment on the balloon to the interior of the bladder, as recommended by Dr. Clarke. He also used applications of 10 to 15 per cent. nitrate of silver.

TO WHAT EXTENT DOES THE HYPERTROPHIED PHARYNGEAL TONSIL ATROPHY AT OR ABOUT PUBERTY?

This was the subject of a paper by Dr. S. K. MERRICK. He had been struck by the frequency with which the family physicians had told parents that the enlarged pharyngeal tonsils of their children would disappear spontaneously at from 12 to 14 years of age. Indeed he had found that several of the text-books gave this same opinion, or else avoided the question altogether. He had been able to collect a few statistics from his own practice and in all cases which he had seen which have refused operation in childhood, in none of them have the tonsils disappeared at puberty. There is some information obtained in observing the ages at which patients applied to him for treatment; out of fifty cases operated on in 1895 and 1896, sixteen were under 14 years of age, while thirty-four were above that age. If the tonsils atrophied after puberty it is strange that so many cases come to operation after puberty. We may conclude that an insignificant number of hypertrophied glands will disappear at puberty if left to themselves. Not only this, adenoids make a patient prone to repeated colds as other throat affections and may become tuberculous in character.

Dr. JOHN N. MACKENZIE said he had never allowed the case to reach puberty without operation. It is amazing what troubles these pharyngeal growths may cause and what fearful inroads these troubles make in the health. He had operated on infants in arms. The growth should be operated on as soon as discovered and should never be allowed to proceed unchecked. He spoke of the great disfigurements of the countenance from this trouble and the affections of hearing, etc.

THE EARLY SYMPTOMS OF GENERAL PARESIS.

This was the subject of a paper by Dr. GEORGE H. ROHÉ. We should look for the early symptoms although the results of treatment are not encouraging. The diagnosis must be made from a collection of symptoms of partly physical and partly psychical. The disease generally begins after the thirty-fifth year and rarely after the fiftieth. Those in the higher walks of life are attacked by preference and men more than women. Clergymen are almost exempt and actors are most frequently affected. Syphilis may be one of the causes. The symptoms are various and the treatment is unsatisfactory and

rarely does more than prolong life a few years. The iodids may be given.

Dr. EDWARD N. BUSH was much pleased with Dr. Rohé's paper. He thought that the early symptoms of paresis occurred in this order: 1, vasomotor; 2, motor, and 3, psychic. Sometimes depressing ideas usher in the disease.

EVENING SESSION.

Dr. WM. OSLER presented a case of diffuse scleroderma. The patient was a white man about 30 years old who has suffered from a hardening, thickening and gradual immobility of the skin. There had been inflammation, erosion and finally disability. This trouble was most marked in the hands and arms and face, although the skin of the whole body was somewhat hide bound; it is hard to pinch the skin, the patient can not close his hands tight. There are two forms of this disease, the diffuse form and the local form. This is a case of diffuse scleroderma. The etiology of the disease is not known and the pathology is very obscure. Thyroid extract is sometimes efficacious in this disease and sometimes not. In this case the man had been helped very much by it and there were chances that it would stop the progress of the disease, if not cure it. He can not elevate his shoulders. This is a slow progressive disease and it is very rare; he himself had been in practice twenty years before he saw a case and had seen only six cases altogether.

THE PATHOLOGY AND BACTERIOLOGY OF TYPHOID FEVER.

Dr. SIMON FLEXNER made some remarks on this subject. We have every reason to believe that the disease comes from the germ, the bacillus, in the anatomic tract. There is no ground for believing that it gets into the body in any other way than through the intestines. This fact is based not only on the pathologic anatomy but on experiments as well. We can not produce the disease in animals. Not all parts of the intestines are alike prone to infection to the same extent. Infection takes place where the lymphatic follicles are in aggregation. Not all the lymphatic aggregations are affected to the same extent. There is a general distribution of these lymphatic follicles throughout the whole tract of the intestines, but not all are affected in typhoid fever. The agminated glands are more susceptible to the poison than the solitary ones and those nearer the lower part of the small intestine are especially affected. Here the infectious material of typhoid fever is kept a long time owing to the anatomic character of the parts. The ulceration produced by the bacilli may be very superficial affecting only the mucous membrane, or the whole thickness of the intestinal coats may be affected causing perforation. Many epidemics are from an affected water supply. The organism of this disease is not particular as to where it lives and can thrive in water a long time, also in milk. It is hard to discover and separate it from the other organisms. The growth is often invisible and causes no change in the color or taste of the milk infected, nor does it cause coagulation. This fact helps in its recognition because the organisms with which it is confused grow visibly, and recent methods allow the typhoid germ to be discovered in the intestines. By the use of the differentiation method of Elsner in culture media of varying acidities the growth of the typhoid organism in plate culture may be easily separated. The methods of Pfeiffer and Widal by which the disease is made out in its early stages is very ingenious. A bouillon culture of typhoid germs in mixed with blood from a suspected case of typhoid. If it is the disease, the effect of the serum from the typhoid case causes a loss of motility, a clinging together and finally a disintegration of the organisms. Wyatt H. J. Johnston has been able to make a diagnosis of typhoid fever in many cases in a short time in a hanging drop of a pure culture of the typhoid organisms to which serum from a typhoid patient has been added. This is a great advance in our diagnostic methods and should be made use of by all physicians.

Dr. WM. OSLER spoke of the prevalence of typhoid fever and said there were too many cases in the State of Maryland and in Baltimore. He said this prevalence was an index of the sanitary intelligence of the community and of the physicians and with the help of the public and of the politicians it could be stamped out within three years. He then called on Dr. Fulton, the new Secretary of the State Board of Health to make a few remarks on typhoid fever.

Dr. JOHN S. FULTON said that within his one month of service as Secretary of the State Board of Health he had made one observation and that was that while the country-bred bacillus enjoyed great prevalence in the city, the city-bred bacillus seems to be especially prevalent in the country. As a preliminary step to obtain statistics he had written to fifty-six physicians throughout Baltimore and Maryland, and had received twenty-three replies, and to explain his opening remark he had found that the city physicians maintained that the cases in their care had originated from infection in the country, while the country physicians blamed the city infection for their cases. He said there was also many cases of typhoid fever concealed under the name of typho-malarial fever, the majority of persons apparently thinking that this combined form of the disease less serious than either one disease alone. To show how unreliable the statistics are he would quote from one of the hospital reports (Bellevue Hospital) which showed sixteen cases of typhoid fever with a mortality of sixteen, and seventy-six cases of typho-malarial fever with no deaths. Either their diagnosis was very bad, or their therapy was murderous. He had been studying the health reports of the State of Michigan since 1886 and had noticed that first many cases of typhoid and typho-malarial fever were reported, but gradually, year by year, the typho-malarial cases were disappearing while the malarial and typhoid cases were slightly increasing. He said that the State Board of Health of Maryland would shortly make a complete investigation to ascertain the sanitary conditions in reference to typhoid in Maryland and letters would be written to every physician in the State. This would be the happiest and most profitable investment Maryland ever made. If we could place with the board of experts enough money to make a substantial beginning of the reform they would realize the possibilities that Dr. Osler has maintained.

Dr. WM. B. CANFIELD made some remarks on the

MODERN METHOD OF EXAMINIG URINARY SEDIMENT.

He said that, as a rule, the chemic examination of urine was easy, but the examination of the sediment was not so easy unless it was especially abundant. When the sediment was scarce or apparently absent, important ingredients may be overlooked. The method of allowing the urine to stand in a conical glass has some disadvantages especially in warm weather when decomposition may occur, also casts may remain suspended and often adhere to the sides of the glass and escape observation. Moreover, this method of examination involves a waste of time; for this reason he would advocate the more general use of the centrifugal. The centrifugal machine has been long known and used, for example in sugar refining and also in many physiologic experiments, but only of late has a smaller and portable machine been made which can be easily used. It was surprising to find so little mention in books of the use of this machine in even the most modern text books on urinary analysis and he also thought that, with the exception of the larger hospitals and a very few physicians, the centrifugal was still unknown. He then exhibited the machine which he used and demonstrated the method employed.

Dr. J. M. T. FINNEY then made some remarks on the "Use of the X Rays in Surgery." Messrs. Arnold and Smiles of the Edison Company, first explained the use of the machine and its simplicity as put out by the Edison Company. He explained the advantage of it in diagnosing dislocations, fractures or other deformities made visible by it, and suggested that by the use of photographs which could be easily taken in the light without a lens, that the surgeon could keep a complete record with illustrations of every case adaptable to the machine and thus protect himself against malpractice suits. In conclusion, Dr. Finney related some cases and explained the advantages of the machine from a surgical standpoint. After this there was a general discussion of the X Ray machine of various cases which had been brought in by local physicians.

SECOND DAY—WEDNESDAY, NOVEMBER 11.

Dr. FRANK MARTIN read a paper on

CANCER OF THE TONGUE,

in which he described the character of the growth usually present, the epitheliomatous; the age most prevalent, 45 to 68; the length of time it took the growth to develop, six months to three years, and the various operations for its removal. He said that the symptoms at first were very undefined with very little pain. It usually begins on the side of the tongue and in its interior half and the duration of life without operation had been recorded as one year to eighteen months. He spoke of the various operations such as that done with the tracheotomy, with excision of the jaw and with operation through the mouth; he found that the operation by excision of the jaw bone gave the most complete results and in his experience the wound healed kindly.

Dr. JOHN M. T. FINNEY said that his experience with the wound left by the excision of the jaw granulated very slowly and gave much trouble. He referred to several cases that he had had with the result.

Dr. J. W. HUMRICHOUSE of Hagerstown, then read a paper on "Some of the Results of Bacteriologic Research," in which

he reviewed what we know up to the present time of the various diseases and their specific organisms with the treatment. This paper was discussed by Dr. David F. Unger of Mercersburg, Pa.

Dr. RANDOLPH WINSLOW then reported two cases of "Gastrostomy for Esophageal Obstruction."

Dr. JOSEPH GICHNER read a paper on the "Present Status of the Treatment of Tuberculosis," in which he reviewed various methods of treatment of that disease of the present day.

Dr. H. O. REIK read a paper on "The Practical Use of Skiascopy."

Chicago Ophthalmological and Otological Society.

Regular meeting held at the Chicago Athletic Association, Oct. 13, 1896.

Dr. HENRY GRADLE in the Chair.

There were twenty-five members and guests in attendance. Minutes of the April meeting were read and approved.

The application of Dr. Will Walter of Marquette, Mich., was read and referred to the Committee on Membership.

The President then introduced Dr. G. C. SAVAGE of Nashville, Tenn., who addressed the society on

THE ACTION OF THE OBLIQUE MUSCLES IN OBLIQUE ASTIGMATISM.

Dr. SAVAGE's chief object in addressing the Society was to endeavor to prove the distortion of retinal images by the eye with oblique astigmatism, the address being called forth by the denial of Dr. Hotz that such optic distortion took place. Dr. Savage showed numerous photographs taken with lenses made astigmatic and demonstrated by these a distortion of rectangular figures and of angles. Many of the photographs were new and had not been before used by him in any of his numerous articles on this subject. Many of the points presented have been embodied in his former communications on the subject but were set forth by him in a new light.

Dr. F. C. HOTZ—Honest criticism is certainly the best means for clearing up disputed points in science, and the question of refraction of astigmatic eyes offers a great many mooted points, as we all know. The question which Dr. Savage has brought up this evening of what he calls distortion of retinal images, which properly we ought to call rotation or displacement of retinal images, is one that requires our serious consideration. On a previous occasion I criticised his teachings, and I am glad to know that it has stimulated him to further investigation, and that his recent investigations will also stimulate others, among them myself, to give this matter renewed attention. The demonstration which I gave to the Society a little over a year ago was perhaps not as complete or as minute as it ought to have been. Perhaps it would have been better to make a cross cut to represent two light lines.

I understood Dr. Savage to claim at that time that a horizontal line in an eye with oblique astigmatism was displaced or rotated on the horizontal plane by prismatic action. I took exception to that. You will notice that the doctor now offers a different explanation altogether, which he bases upon the cylindric refraction and not on prismatic action. Whether this explanation will hold good or not we shall have to investigate. We can not decide by looking at the model presented, as the subject requires a more careful study. The photograph shows the obliquity of these images, but whether this is due to actual rotation or to the different refraction magnifying the image of the rectangle in one direction and shortening it in another, is still an unsettled point with me. If you look at a right angle through an oblique cylinder its image is magnified in one direction and the right angle appears acute or obtuse, according to the position of the cylinder. I stated at the time that Dr. Savage's teaching could not be proven—at least, I could not prove it—by clinical demonstrations. I took patients with oblique astigmatism and subjected them to the Doctor's test of the double prism before one eye, closing the other eye first, and then opening it while looking at a horizontal line. The double prism produces monocular diplopia and when the other eye is then opened, the patient will see a third line between the two. I failed with my patients, as well as with myself, my assistant and others, by oblique cylinders to see any obliquity of the third line. The Doctor in his answer takes me to task and says that was not a proper test; that he would not expect the parallelism of these lines to be disturbed because the oblique muscles were accustomed to action and would hold these lines parallel. Now, I expect that the oblique muscles act under the diplopia test, as the straight muscles, the recti; do; and when there is an abnormal action of the recti muscles, as in esophoria for instance, and we produce vertical diplopia, the double images are not seen in a vertical line because the muscular strain is released more or less as soon as binocular vision is abolished. I should expect the oblique muscles to do that also, and the Doctor admits that the oblique muscles do relax their abnormal action if binocular vision is suspended, when he speaks of adjusting the axis of a cylinder, for he says one eye being closed, while the other eye is tested. The oblique muscles will cease rotating and the eyes will find their natural position. If that was not the case I could not understand how the Doctor could ever place the axis of a cylinder correctly in oblique astigmatism. I still maintain that this double prism test should show obliquity of the image, if oblique astigmatism produces such obliquity.

Another point is this, that the photographs which have been shown are made with a camera and a comparatively high power cylinder. In the pictures he first made he used a —3 D. cylinder. Now, the two convex lenses in cameras have a refractive power of 3 or 3½ D. each, and if we add to these a —3 cylinder we produce in the camera an astigmatism which in the human eye would be equal not to 3 D., but to about 30 D.; for taking the refraction of the human eye as about 40 D., in the one meridian the refraction would have to be 40 D., and in the other meridian 70 D., to produce the same ratio of difference which we get in the camera by superimposing a —3 D. cylinder (4 : 7). That such an enormous astigmatism should cause marked distortion of images is not surprising. To reproduce in the camera the conditions of an astigmatism as high as 3 D. we must not use a cylinder of more than ½ D. I show you here the negative of a rectangular cross taken while a —.50 D. cylinder, axis 45 degrees, was held in front of the camera lenses. You notice a very slight obliquity of the lines of the cross; the angles are not exactly right angles. But the distortion is exceedingly slight as compared with the distortion in Dr. Savage's rectangles. Now, if a condition equivalent to an astigmatism of 3 D. produces so slight distortion only in the less degrees of astigmatism—and this means in the great majority—the disturbance becomes so faint as to be imperceptible.

But even admitting the obliquity of the images I should like to ask Dr. Savage to explain how binocular vision is to be benefited by the action of the oblique muscles. For if they rotate the eyeballs so as to bring the images of horizontal lines upon corresponding meridians of the retina, the same rotation deflects the images of vertical lines farther away from corresponding retinal meridians. While this supposed rotation might favor and assist the fusion of images of horizontal objects, it would undoubtedly render absolutely impossible the fusion of images of vertical objects. I have therefore not understood what benefit the eyes would derive from this rotation, and therefore still have serious doubts as to its occurrence.

Dr. W. F. COLEMAN—In regard to the case reported by me at the April meeting, I took Dr. Hotz's suggestion of leaving off the spherical lens and the patient is completely relieved, and I am indebted to the Doctor for this suggestion. In regard to the subject under discussion, I think the word displacement is a better one than distortion of the image. I have tried the experiment personally and I do not agree with the observations of Dr. Hotz. If I place before one eye a double prism and look at a horizontal line and place a minus 3 cylinder axis 135 or 140 degrees before the other eye, the middle line is decidedly distorted. Some eighteen years ago the subject of oblique astigmatism interested me very much. I collected quite a number of cases who took a cylinder at a different angle in reading as compared with the distance. I tabulated several cases and wrote it for the *Archives*, but for some reason it was not published. A few weeks ago I tested a patient who had 3 D. of astigmatism, the best angle for distance was 70 degrees and for reading was at 120 degrees, and the difference in vision for reading was 1.25 Snellen at nine inches with the angle at 70 and 0.5 Snellen at nine inches with the axis at 120, then I first noticed there was rotation on the antero-posterior axis by the action of the oblique muscles, and I can not conceive of any other explanation of displacing the meridian from 70 to 135 degrees.

Dr. HENRY GRADLE—It seems to me that we can scarcely dispute the premises Dr. Savage has brought forth this evening, but we are entitled to dispute the conclusions he draws therefrom, at least numerically. He exaggerates the importance of the subject. In the first place, as Dr. Hotz points out, the photographs were taken with cylinders which are of tremendous strength compared with the D. strength of the eyeball. The eye is about 40 to 50 D. if we measure the posterior focus from the second principal point, and with a cylinder of 2 or 3, or even 4 D. it represents but a small proportion of the refractive power of the eye, while a cylinder of 3 D. represents an enormous proportion of the refractive power of the camera lens of

four or six inches focus. Hence he exaggerated the condition of distortion or displacement in the eye. Furthermore, while this distortion must occur to a much less extent than Dr. Savage has represented, the fusion could not occur by rotation in one or the other direction, because other vertical or horizontal lines would not fuse on the same plane. This discrepancy in the position of the two sets of lines amounts to comparatively little; the effect would be a stereoscopic one, and with fusion of the horizontal lines the vertical lines would incline. On the other hand, the eye is undoubtedly capable of a certain degree of rotation in the form of line deviation. The apparatus which I devised some years ago showed that moderate deviation of one or both eyes is exceedingly common with and without asthenopia. There are few eyes which retain the horizontal and vertical meridians when binocular vision is abolished. A moderate rotation of 1 or 2 degrees is common; a rotation of 5 or 10 degrees is not uncommon, and this independent of the existence of asthenopia or interference with the integrity of the entire nervous mechanism of the eye. If such is the case we can readily see how a moderate deviation in the rotary direction of the eyes might occur in astigmatic eyes just as well as in eyes not astigmatic, or may occur in regular and horizontal astigmatism, as well as in astigmatism with obliquity.

Dr. J. E. Coleburn—I have 1 D. oblique in my left, and 2 D. in my right, or nearly so, and I am conscious of the change of position when I cover first one and then the other with my glasses. I have never stopped to analyze it until I sat here to-night. I am conscious of a little movement of that kind. In noting verticals I would often close my right eye. I use my left eye in reading almost always. I have always had more or less difficulty in fusing verticals, but in looking at horizontals I am never conscious of the same disturbance, although in looking over some drawings I made years ago before I wore glasses I found I would always be out of my verticals, but never troubled with horizontal lines.

Dr. Hale—Without wishing to enter into the controversy, I would like to say that but little mention has been made of the possibility of correcting this oblique astigmatism by means of the ciliary muscle. We all undoubtedly admit that it is possible for the eye to correct an astigmatic cornea by means of unequal contraction of the ciliary muscle, or some similar process by which the lens becomes more convex in some meridians than in others. Why this could not occur as well in oblique astigmatism as in vertical or horizontal astigmatism, has not been made clear to me.

Dr. Wood—I would like to ask Dr. Savage if he has paid any attention to the question of cerebration in these cases of oblique astigmatism and distortion of the images.

Dr. Savage in reply stated that he believed the term distortion to be better than the term displacement because, as he conceived it, the images were twisted by the obliquely astigmatic eye. In answer to Dr. Wood, he did not believe that the unconscious cerebration had much to do with the fusion of images, but that the work was done by the action of the oblique muscles.

Dr. Ware showed an instrument for dividing the capsule in secondary cataract operation. It was shaped much like a crochet hook, but the barbed side of the instrument had a cutting edge. Dr. Ware sometimes used the instrument singly and sometimes used two of them, cutting against each other. He had found it of value in many cases of very tough capsule.

On motion, a vote of thanks was extended to Dr. Savage for his kindness in coming before the Society and expounding his theory of the oblique muscles.

On motion, the Society adjourned.

C. P. Pinckard, M.D., Secretary.

Southern Surgical and Gynecological Association.

Abstract of the Proceedings of the Ninth Annual Meeting, held in Nashville, Tenn., Nov. 10-12, 1896.

(Concluded from page 1105.)

THE TREATMENT OF PREGNANCY AND LABOR COMPLICATED BY FIBROID TUMORS OF THE UTERUS.

Dr. Henry D. Fry of Washington, D. C., read this paper. He advanced two propositions. First, that the production of abortion is unjustifiable. Second, that labors presenting serious difficulty to delivery are best treated by abdominal section and removal of the child and tumor. By maintaining this position the interests of the mother are not relegated to second place. While saving the life of many infants, the maternal mortality will also be diminished. After making a few brief remarks on the natural history of fibroid tumors complicating the pregnant state and reporting a few cases that had come under his care, he considered the treatment.

Dr. A. J. Coley of Alexander City, Ala., reported a case of cyst on the right side with a left uterine tumor, low down, involving the body of the uterus, which was firmly fixed in the pelvis and complicated pregnancy. The woman, 40 years of age, suffered so much pain that it was thought advisable to resort to hysterectomy, but it was not insisted on. The woman had been married a little over a year. She was closely watched and as pregnancy and labor advanced the tumor was pushed above the brim of the pelvis, the woman subsequently delivered naturally of a child, and is now attending to her household affairs. Dr. Coley counsels against operative interference in many of these cases.

Dr. R. R. Kime of Atlanta, encountered a case some two years ago in a debilitated patient with evidences of infection before labor. In introducing the hand a tumor was felt in the posterior uterine segment, crowding the cervix apparently above the symphysis pubis, and it looked as if the patient could not be delivered. However, by waiting and placing the patient in the exaggerated Sims position and elevating the growth, delivery of the child was affected.

Dr. Howard A. Kelly agreed with the conclusions of the essayist. There was a tendency on the part of the profession to interfere too much in cases of pregnancy complicated by fibroid tumors of the uterus. He had been called in consultation to see a number of such cases, but the indications were not such in some of them as to warrant the induction of premature labor. In many instances a consultation had been the means of postponing operative interference. When fibroid tumors complicating pregnancy were situated in the upper part of the uterine body, unless large and multiple, they were comparatively unimportant. If situated in the lower part of the uterus and it is found as pregnancy advances they can be pushed up, this should be done in order that labor may proceed naturally. On three occasions he had opened the abdomen and had done a myomectomy for tumors complicating pregnancy, the women subsequently going to full term and being delivered normally.

Dr. W. D. Haggard, Sr., of Nashville, mentioned a case of uterine fibroid complicating pregnancy, which came under his observation a few years ago. Hysterectomy was advised by the consultants but not resorted to. The woman was subsequently delivered of a child, and the tumor six months later had entirely disappeared. Dr. Haggard reported another similar case.

Dr. James A. Goggans of Alexander City, Ala., had observed during the last twenty years a number of cases of pregnancy complicated by uterine tumors. He had seen the case referred to by Dr. Coley. He thinks it is unwise to resort to hysterectomy in a great many cases, believing that the tumors can be pushed up and delivery effected without surgical interference.

Dr. James McFadden Gaston cited a case of dermoid tumor which complicated pregnancy. The obstruction was so great that it was utterly impracticable to undertake to deliver the woman by forceps, and it was concluded to lessen the obstruction by aspirating the tumor. This was done, and a little more than one quart of grumous material was drawn off, after which the woman was delivered, with forceps, of a dead child. Dr. Gaston believes the woman will have to be subjected to a radical operation for the removal of the dermoid before perfect relief is afforded.

Dr. George A. Baxter referred to the danger of postpartum hemorrhage in cases of fibroids complicating pregnancy, and related an interesting case. The fibroid tumor interfered with the natural contraction of the uterine fibers, and on this account it was exceedingly difficult to arrest hemorrhage. This was a complication which endangered the life of the woman.

Dr. E. S. Lewis said it often falls to the lot of physicians to meet with a series of anomalous cases, such as those that had been reported by the essayist, while other physicians with probably quite as large experience would pass through life without meeting some of the complications that had been mentioned. During an experience extending over thirty-four years he had never met with a fibroid tumor which justified interference before labor, that is, a fibroid occupying the lower segment of the uterus and impinging upon the pelvic cavity. Within the past year he had delivered two women having large fibroids. In one case when pregnancy supervened, after suspension of menstruation for two months, he was unable for several months to determine the existence of pregnancy. The uterus then reached above the umbilicus, but the woman was pregnant and was delivered at full term with forceps, but with no extraordinary difficulty. The other woman had an abdominal tumor the size of a six months' fetus. Although she had been married a number of years, she was about 40 when she

became pregnant. The tumor occupied the upper portion of the body of the uterus, but she was delivered without the use of instruments. He could conceive that in a case of fibroid situated in the broad ligaments or occupying the lower segment of the uterus, seriously impinging upon the cavity of the uterus, hysterectomy would be inevitable, but it has been his fortune to escape such cases.

Dr. FRY, in closing, was glad to note that the general trend of the discussion was favorable to conservative work in the treatment of pregnancy complicated by fibroid tumors of the uterus and of permitting women to go full term and trying to deliver them naturally. Some of the cases in the paper which he did not read exemplified the wonderful resources of nature in overcoming uterine obstructions. Postpartum hemorrhage was one of the serious complications of labor under these circumstances and was common. If the placenta was attached to the fibroid tumor hemorrhage was free. If it is found necessary to operate, Cæsarean section ought not to be resorted to, as the mortality following such a procedure was fully as high as 84 per cent. The best thing to do is to resort to hysterectomy, either the complete or supravaginal method.

SECOND DAY—MORNING SESSION.

Dr. R. R. KIME of Atlanta read a paper entitled

URETINE DRAINAGE AS A FACTOR IN THE PREVENTION AND RELIEF OF PELVIC INFLAMMATION,

in which he drew the following conclusions:

1. A uterine tampon is not a true drain and even obstructs drainage in many cases.

2. Capillary drainage is secured by carrying a strip of gauze up into the uterine cavity, not packing it, and then it drains for a few hours only.

3. Gauze can not even act as a capillary drain when either end or center is constricted, or when coated with mucus.

4. Gauze when saturated with serum, unless it contains an antiseptic, forms a hotbed for germ development.

5. Never tampon the uterus in puerperal septic infection, except to check hemorrhage.

6. The good effect of a gauze tampon in cases of endometritis and after abortion is not due to drainage, but to its effects as a tampon, *i. e.*, checking hemorrhage, stimulating uterine contractions, prolonging medication of the endometrium and acting as a surgical dressing.

7. The uterine drainage tube is the most essential factor in the treatment of puerperal infection, and the best method of securing drainage when demanded in other diseased conditions of the uterus.

8. It will save more lives, relieve and prevent more pelvic complications, than any other one factor at our command.

Dr. W. E. PARKER of New Orleans read a paper on

GUNSHOT WOUNDS OF THE ABDOMEN,

and reported thirteen cases with six recoveries. In his paper he made the statement that he believed, in the hands of men skilled in abdominal work, 75 per cent. of cases of wounds of the small intestine should recover if the cases were seen early, the prognosis being better in this class of cases than in any other. He advised an early and rapid operation in all cases.

In conclusion he made the following general statements: The diagnosis is generally easy, but when in doubt he advised enlarging the wound or probing. In doubtful cases he was inclined to attach much importance to pain referred to the umbilicus as a symptom. He stated that he had never seen a case where this symptom was not present. There is frequently but little shock when grave symptoms are present, and when symptoms of it are present, the trouble is generally hemorrhage and not shock. Senn's gas test was not used in any of these cases, and he spoke of it as being unnecessary in at least a majority of cases, uncertain in the hands of those not skilled in its use, and making it more difficult to replace the intestines after sewing the wounds.

As to the technique he said: 1. Unless the wound is well to one side, it is best to make a median incision, and it should be long enough to enable the operator to make a thorough examination of the abdominal contents. 2. The whole intestinal canal should, as a rule, be examined. 3. All peritoneal wounds should be sutured with silk Lembert sutures. Intestinal wounds should, other things being equal, be sewn in the long axis of the bowel. 4. If the liver is wounded, better results are obtained from packing than from suturing it. 5. If the kidney has been wounded it is best to suture the peritoneal wound and treat the kidney extraperitoneally, if necessary. Of course, he did not refer to those where the laceration and hemorrhage are so great that it is necessary to remove the kidney at once. 6. Drainage, except in late cases, is not necessary if all hemorrhage has been stopped. 7. Cases in which the intestines can not be sutured without great risk of obstruction should be resected. 8. While enough time should be taken to do the work thoroughly, no time should be wasted. 9. Unless the bullet can be felt, search should not be made for it, as it causes unnecessary delay. 10. The superficial wound should be closed with silkworm gut or silver wire, and the author believes that a single suture should include the skin, abdominal walls and peritoneum.

Prognosis: 1. The sooner the patient is operated upon, the better the prognosis. 2. Those cases that have been reported in a series including all cases have shown a mortality of about 62 per cent. The prognosis is best in cases of wounds of the small intestine, and he believes that 75 per cent. of the cases will recover if seen early. By early he means in the first two or three hours. 3. We all know that alcoholics stand all surgical work badly, and yet most of these patients have been drinking before they come under our care. The prognosis in non-alcoholics would be better than in alcoholics. 4. If the stomach and intestines are empty the prognosis is usually improved by this fact.

After-treatment: While not favoring drugging these patients, strychnin and other stimulants should be given hypodermatically, if necessary. Especially should strychnin and alcohol in some form be given to alcoholics. Much depends on starting these patients well. If restless after the operation or suffering, small doses of morphin should be given. If the stomach is quiet and and has not been injured, small amounts of water and Ducro's elixir can safely be given at the end of twenty-four hours, and small quantities of milk or some light broth can be given. If the stomach has been injured, the feeding should be per rectum. The diet should be liquid for at least two weeks. If there is shock with the clammy sweat that is sometimes seen, atropin, gr. 1-60, may be given every three hours as may be necessary. When shall we give a purgative? This if one of the most important questions that we will be called upon to decide. If we give a purgative too soon, our stitches may pull out, and if we wait, adhesions may form and give us trouble. The bowels of these patients will usually act by themselves about the end of the fifth or beginning of the sixth day. If they do not, a mild purgative assisted by an enema should be given about the end of the sixth day, or on the morning of the seventh. As a rule, these patients should be kept in bed for at least two and a half weeks.

DISCUSSION.

Dr. JAMES MCFADDEN GASTON was not able to corroborate, either from his experience or reading, the favorable percentage of recoveries which the essayist had given in gunshot wounds of the abdomen. The fact that the bullet enters the abdominal cavity, if it does not wound the intestinal tract, was not necessarily a very serious matter, although wounding of the mesentery with hemorrhage was sufficient reason for exploration. As to the Senn gas test for determining perforation of the bowel, it was not used by very many surgeons to-day. Dr. Gaston is very positive in his convictions of the propriety of laparotomy after gunshot wounds of the abdomen, and the sooner the better.

Dr. N. P. DANDRIDGE of Cincinnati called attention to the importance of making a distinction between penetrating gunshot wounds and penetrating stab-wounds of the abdomen. The latter were much less dangerous. In fact, a very large proportion of these cases, where it seems as though the intestines must necessarily be wounded, get well without operation. In gunshot wounds, however, an exploration should be made in every case where there is reasonable supposition that the abdominal cavity has been entered. Gunshot wounds were much more serious than stab-wounds. He could not agree with the essayist as to the percentage of recoveries likely to take place. Personally, he had never succeeded in saving a case of gunshot wound of the intestine.

Dr. A. M. CARTLEDGE said that Dr. Parker's results were the best he had seen mentioned in literature, particularly in penetrating wounds involving the intestines. He had operated on five cases of gunshot wounds of the abdomen, three of them hopeless from hemorrhage from the beginning, one dying within an hour and a half from a short operation, simply from the enormous amount of blood lost from a wound in the mesenteric vessel. He had never saved a case of gunshot wound with intestinal perforation.

Dr. A. V. L. BROKAW of St. Louis considers every case of gunshot wound of the abdomen a law unto itself, and the surgeon has to meet the emergency as it occurs. He agrees with the essayist that a quick operation is absolutely necessary.

Dr. W. E. B. DAVIS emphasized the importance of early operation, and called attention to the almost hopeless condition

that is found if the surgeon operates after twenty-four or forty-eight hours. At the Charleston meeting of the Association, he said, he was criticised for making the statement that at the end of twenty-four or forty-eight hours usually a general peritonitis would develop after a gunshot wound with intestinal perforation. If the surgeon had this condition to contend with an operation would offer scarcely any hope of recovery, unless done very early.

Dr. B. R. RIETT happened to have had three cases of gunshot wounds of the abdomen during the past year. In one case, a little boy, there were several intestinal perforations. He was operated on, but died within three hours thereafter. Case 2 died eleven hours after the closure of the perforations. Case 3 was that of a negro boy who had six perforations, was operated on, the perforations closed, and made a good recovery.

Dr. H. M. HUNTER of Union Springs, Ala., laid stress on the importance of early operative interference. He holds that very few patients will recover after twelve hours if not operated on, no matter how expert the surgeon may be. He had operated on a man thirty-six hours after the receipt of the injury who had two perforations of the colon, the ileum being just touched. The man died in three or four hours thereafter of general peritonitis.

Dr. JOHN D. S. DAVIS does not believe it is possible to obtain 75 per cent. of recoveries from early operations in injuries of the small intestine in private practice. The cases saved by Dr. Parker were operated on two hours after they were shot, hence early operation was the keynote to success. While he was not prepared to agree fully with Dr. Hunter that none of the cases could be saved after twelve hours, still, the majority of them would die if not operated on within twelve hours. The most serious injuries to the belly from gunshot wounds were seldom followed by symptoms. There may be several intestinal perforations without the manifestation of any symptoms.

Dr. F. W. MCRAE had seen and known of several cases of penetrating wounds in the abdomen, all of which had terminated fatally, with one exception, and this patient was operated on by the late Dr. Armstrong, in which there were several perforations. A foot and a half of the small intestine was resected and the man recovered. The speaker would have some hesitancy in opening the abdomen where there was apt to be some medico-legal complication.

Dr. HOWARD A. KELLY offered the following resolution, which was unanimously adopted:

Resolved, That it is the sense of all the members of the Southern Surgical and Gynecological Association that in gunshot wounds penetrating the abdominal cavity, the proper routine procedure is to make an immediate exploratory incision.

Dr. PARKER said, in closing, that the late Dr. Miles in his first series of cases reported thirteen cases, the percentage of recovery being nearly 40 per cent. He had operated on probably twenty additional cases before his death, and the percentage of recoveries was very much better than in the first series. As to the medico-legal aspects of this subject, all surgeons should advocate the early opening of the abdomen, and if some fellow practitioner should get into trouble as a result of it, the profession should stand together and support him.

Dr. L. S. MCMURTRY of Louisville read a paper entitled

THE EVOLUTION AND PERFECTION OF THE ASEPTIC SURGICAL TECHNIQUE.

The author cited cases where surgeons of world-wide reputation had infected their patients through some imperfection in the aseptic surgical technique, and said the subject deserves much more study and attention at the hands of operative surgeons than has heretofore been given to it. So far as instruments, dressings, etc., are concerned, surgeons had an absolute guarantee against sepsis in sterilization by heat; but when it came to the operative field, the hands of the operator and his assistants, they were reduced to mechanical and chemic methods of asepsis, which were certainly far less efficacious and reliable than sterilization by heat. Every thing that comes in contact with the field of operation in the form of instruments and dressings is exposed to heat at a boiling temperature, hence the patient was safe against septic infection, but so much could not be said for the hands of the operator and those of his assistants and the field of operation.

SECOND DAY—AFTERNOON SESSION.

THE PRESIDENT'S ADDRESS.

This was delivered by Dr. E. S. Lewis of New Orleans. Reference was made to the brilliant achievements of the masters of the art of surgery who had passed away and of the galaxy of shining lights who had followed after, who had created an era in the medical history of this century for all future time. How can we wonder that the "magnificent records obtained by experts have proved alluring temptations to the inexperienced and ambitious," and led to abuses which have left a blot on the fair page of abdominal surgery? As a representative body of the surgeons and gynecologists of the South, it should condemn the reckless and thoughtless plunging in this delicate and difficult work, without knowledge, fitness or preparation. The statistics of the skilled who had learned to minimize risks and cope with difficulties, should not serve as an argument with the inexperienced to secure subjects. The responsibility of human life should not be ignored in the craving and struggle for notoriety or fame.

With regard to the relative merits of the abdominal and vaginal operations for the removal of the ovaries and tubes, or of the uterus with the appendages, President Lewis said that divergent opinions are entertained and heated discussions have arisen. For the vaginal method it is claimed less shock is produced, better drainage is obtained, the abdominal walls are not weakened, and the extirpation of the uterus removes a menacing source of infection and of physical and nervous disturbance. For the abdominal operation rapidity of execution is contended, with increased security to adjacent organs and facility of repair when injured, as the structures are always in view. The removal of the uterus is also condemned as complicating and unwarrantable unless justified by the state of the organ. In the modified vaginal method, as practiced by Doyen and others, the uterus is not necessarily sacrificed, nor a sound ovary and tube. It is in touch with the conservative movement of the day, and is in marked contrast with the ultra-radical operation of Péan.

Dr. RICHARD DOUGLAS, of Nashville, read a

MEMORIAL ADDRESS ON DR. PAUL F. EVE,

in which he said a retrospect of the lives of great men inspired us with the spirit of emulation and indicated to the ambitious mind the paths to fame. Prof. Paul F. Eve had three distinguishing characteristics—energy, consistency of purpose, and extreme modesty, and upon them he built for himself an everlasting reputation and secured an imperishable place in the temple of fame. It is not alone as surgeon and teacher that his reputation rests. As a contributor to current medical literature he was a conspicuous authority. In military surgery he was without a peer. His experience in Poland had engrafted a taste for the work which unfortunately in later years, as one of the chief surgeons of the Confederacy, he had more than ample opportunity to gratify. As the result of his observation and work during the war of secession he recorded many valuable facts which the surgeons of to-day would do well to ponder. As a lithotomist Dr. Eve was prominent. While his preference was for the bilateral method, yet he was not wedded to it, and appreciated the many advantages of the suprapubic operation and often practiced it, not, however, with the same success that he achieved by perineal section. Thoroughness characterized every undertaking of his life. When the great and good life of Dr. Eve came to an end, suddenly but peacefully on Nov. 3, 1877, he had reached more than his three score years and ten, and, dying, left behind him a name that was destined to live on in surgery through many generations.

Dr. J. MCFADDEN GASTON of Atlanta, followed with a paper on

THE RELATIONS OF THE TUBERCULAR DIATHESIS TO ITS LOCAL MANIFESTATIONS.

He said that in considering the various forms in which tuberculosis shows itself in different structures, there must be an underlying element pervading the whole organism, which results from a general deterioration of the secretions. Whether there is a predisposition to the development of tuberculosis in certain parts or organs in advance of any constitutional disease or not, this change occurs in connection with the general impairment of the vital forces which characterizes the tubercular diathesis. While most recent authorities do not make a distinction between scrofula and tuberculosis, there is a fundamental difference in their general und local development. We have different characteristics of tuberculosis when it involves separate organs and structures of the body in a distinctly circumscribed form, or is defined as miliary tubercle in different structures, and yet the dyscrasia which marks the lymphatics under the designation of scrofula differs materially from any of the varieties of tuberculosis heretofore recognized. Dr. Gaston touched briefly on the causes of tuberculosis and reference was made to the papers that were presented before the last meeting of the American Surgical Association on important tubercular lesions. The presence of a condition recognized as a tubercular diathesis corresponds in some respects with the cachexia of carcinomatous tumors, and is held by many to be hereditary. There has been quite a revolution in the opinions of those best versed in

the pathology of tuberculosis as to the transmission of this disease from parent to child, and also in regard to the communicability from one individual to another by ordinary contact in social relations. It is fair to conclude that great caution should be observed in putting restraints upon the marriage of those suffering with pulmonary consumption, and the association of those laboring under this disease should be limited as far as practicable. Finally, the predisposition to tuberculosis can not be relieved by a surgical operation upon the diseased structures, but must be corrected by remedial agencies acting through the absorbent and secretory organs.

SECOND DAY—EVENING SESSION.

Dr. A. V. L. BROKAW, of St. Louis, read a paper entitled

THE RATIONAL TREATMENT OF THE DISEASED APPENDIX BY OPERATION.

He said the question had been vigorously discussed: Is appendicitis a surgical disease at all times, or only surgical at times? He wished to be put on record as favoring the first proposition. He was aware that some ultra so-called conservative practitioners claimed that the surgeon who advocated the removal of the appendix in every case when diseased, was a dangerous faddist, an extremist suffering from an inoculation of the operativus bacillus. He earnestly advocated early operation as soon as the diagnosis was made. Always operate when there is even a slight chance of saving a life, regardless of damage to statistics. Invariably operation should be insisted upon in the recurrent cases. With the knowledge of this dread disease, evolved from the mortuary chambers and the treacherous clinical course in a considerable percentage of cases, why should the rational treatment of all cases be other than by prompt surgery?

Dr. JAMES A. GOGGANS of Alexander City, Ala., followed with a

REPORT OF CASES OF APPENDICITIS.

From the fact that physicians generally take the stand that operative interference in appendicitis is called for only in exceptional instances where the disease advances to suppuration, gangrene and perforation make the treatment of appendicitis a never ceasing controversy, hence his excuse for reporting a few illustrative cases that had come under his observation, hoping thereby to add what he could to harmonize the difference between the physician and surgeon on this, the most frequent and important intra-abdominal lesion in his opinion of the present day. The main point at issue between the physician and the surgeon in the treatment of appendicitis depended much on a perfect diagnosis. This, too, accounted in a measure for their differences of opinion as to where the medical treatment should end, and when the surgical treatment should begin. According to his experience in the management of this affection, there is only one course to pursue, namely, to remove the appendix just as soon as the diagnosis has been made. Usually he defers the operation until the bowels have been evacuated by first administering a few small doses of calomel, followed by a saline purge.

Dr. JOSEPH TABER JOHNSON looks upon appendicitis as a surgical disease and believes it should be so treated. He deprecates the use of opium and considers it the patient's greatest enemy, in that it masks the symptoms and renders diagnosis exceedingly difficult. If opium were not given in some cases a diagnosis could be easily made, surgical interference resorted to and the patient's life saved.

Dr. JAMES MCFADDEN GASTON spoke of the importance of making a distinction between cases that have foreign bodies in the appendix and those of a catarrhal nature leading to a general inflammatory condition around the caput coli. Until we had inflammatory conditions which led to an exudate around the caput coli, it was difficult to definitely determine the exact condition which existed in supposed appendicitis. He was becoming more and more impressed with the fact that there were cases of appendicitis that were unattended with perforation, and that these were curable without operative measures. An illustrative case was cited.

Dr. F. W. MCRAE does not believe every case of appendicitis is a surgical one from the outset. A disease which shows so large a percentage of recoveries was not always an operative one. Treves and other English surgeons had shown that 80 per cent. of cases of appendicitis got well without operation. While demonstrator of anatomy he examined every appendix which came upon the dissecting table, kept an accurate record of each case and about 33⅓ per cent. showed evidences of previous inflammatory trouble around the appendix. The individuals, most of them convicts, had died of other diseases.

Dr. HOWARD A. KELLY favored early operation, alluded to the difficulty sometimes of distinguishing appendicitis from tubal and ovarian disease of the right side and related a case in point. In a woman with very high temperature and distended belly he opened the abdomen, evacuated a quart of pus, washed out, found a gangrenous tube and ovary as well as a gangrenous appendix. The patient recovered nicely from the immediate effects of the operation, but died on the thirtieth day thereafter from abscess of the liver.

Dr. CHARLES P. NOBLE said the safest general rule was to operate as soon as a diagnosis of appendicitis was made. It was impossible to differentiate the cases which would recover from a primary attack from those that would die.

Dr. M. C. MCGANNON of Nashville recalled one case of appendicitis, a boy, where the temperature rose to 105 degrees. The patient was delirious. Upon opening the abdomen the appendix was found to be black but not perforated, It was easily removed and the boy made a prompt recovery. He believes in many cases that if the physician waits and watches for distinct symptoms before operating the patient will die.

Dr. A. J. COLEY had met with six cases of appendicitis and made a strong argument in favor of early operative interference.

Dr. A. M. CARTLEDGE said the diagnosis was the only problem that practitioners were especially concerned with, together with the proper technique in the execution of the operation. The more he operates the more he is inclined to believe we should operate on every operable case as soon as the diagnosis has been made. Mistakes were made by waiting and watching for symptoms to manifest themselves. Very few, if any, surgeons could tell when an appendix had ruptured.

Dr. GEORGE BEN JOHNTSON said for the sake of statistics operations should be divided into two classes. First, those which are performed for recurrent attacks of the disease, and those which are employed for the relief of the severer varieties where perforation has occurred or will take place where there is pus present. If the surgeon is to operate upon recurrent cases, it is better for him to do so between the attacks in order that he may choose his time for operation. While there were cases of the disease that recovered without treatment, the best results were obtained by surgical interference.

Dr. N. P. DANRIDGE finds with increasing experience that he is more and more favorably disposed toward early operation; at the same time, cases present themselves in which he does not advise operative measures. He believes that some of the desperately bad cases were and could be saved by operation.

Dr. R. B. RHETT said he had operated twenty times for this disease. He cited some interesting cases illustrating the importance of early operation.

Dr. W. D. HAGGARD, JR., called attention to the method of Gerster to prevent contamination of the peritoneal cavity in opening appendicular abscesses that are not adherent to the abdominal wall or are not walled off. It consists in introducing thick layers of iodoform gauze through the abdominal incision and packing it between the walls of the abdomen and the abscess sac itself, so that in the subsequent steps of enucleation there is no possibility of soiling the peritoneal cavity.

Dr. D. FORD of Augusta, Ga., spoke in favor of early operation, believing that if cases were not operated on sooner or later, perforation would occur, followed by general peritonitis and death.

Dr. W. E. B. DAVIS thought there were few cases of appendicitis that gave rise to general peritonitis in which the surgeon was called and could do any good. Frequently the surgeon was called too late. Even though the family physician recognizes the condition, it was not an easy matter to persuade the patient to be operated on within the first twenty-four hours, and unless these cases were treated surgically within twenty-four or thirty-six hours, very few of them could be saved. All cases of severe attacks of the disease, in which pain is intense, if seen the first day and consent is obtained, should be operated on. In all cases where there is a second attack operative measures should be resorted to.

Dr. GEORGE A. BAXTER spoke of obliterating appendicitis and asked the essayists to give their opinion of it in their closing remarks.

Dr. BROKAW replied that obliterating appendicitis was nothing more nor less than the relapsing form of the disease as a rule or what had been termed "growling" appendicitis.

Dr. GOGGANS said, in closing, that he could no better present his views on early operation than to say, that if he had the disease or peritonitis supervening upon it, he should demand operation. If he was so low that he could not stand a general anesthetic he would take a local one and would ask the surgeon to open his abdomen and remove the appendix.

Dr. H. M. HUNTER of Union Springs, Ala., reported an interesting case of compound comminuted fracture of the radius and ulna near the wrist joint. He had been unable to find a

similar case on record in the literature of fractures. There were three points with regard to this case: 1, that he was unaware of a similar fracture being reported; 2, he had never read nor heard of the method he had described to reduce the fracture of the forearm; 3, he had never seen nor read of such perfect results as were obtained in this case, the wrist having perfect motion, and there is absolutely no interference with supination and pronation.

Dr. N. P. Dandridge of Cincinnati reported a case of transperitoneal ligature of the external iliac artery for inguinal aneurysm, in which he removed the aneurysmal sac.

In the discussion Dr. W. E. B. Davis also reported a case of ligation of the common iliac for aneurysm of the external iliac, which was followed by an excellent result.

The following officers were elected:

President—Dr. George Ben Johnston of Richmond, Va.

First Vice-President—Dr. F. W. McRae of Atlanta, Ga.

Second Vice-President—Dr. W. E. Parker of New Orleans, La.

Secretary—Dr. W. E. B. Davis of Birmingham, Ala.

Treasurer—Dr. A. M. Cartledge of Louisville, Ky.

Dr. E. S. Lewis of New Orleans was elected a member of the Judicial Council to supply the place of Dr. Hunter McGuire, whose term had expired.

The Association then adjourned to meet in St. Louis, Mo., the second Tuesday in November, 1897.

SELECTIONS.

A Half Century of Surgery.—An unsigned article in the *Boston Evening Transcript*, entitled "One Century of Surgery," is without doubt written or inspired by a medical authority of that city. Some of its points are so well and freshly put that we propose to quote at considerable length from it:

"The semi-centennial of the first surgical operation under anesthesia suggests to the mind the wonderful changes which have taken place in hospital methods during the last century. A visitor who should go through the wards of the hospital today and see the neatly covered beds, the dainty linen, the open, sunny rooms filled with pure air, the attractive nurses in their caps and aprons and the tables laid with the implements for caring for the surgical cases, as if for an entertainment, has but a small conception of the condition of the wards of a great metropolitan hospital in Europe in the latter part of the eighteenth century. There are few accounts which present an adequate conception of the mode of conducting a hospital service in those days. Some, however, are extant, to give some idea of the condition of such a hospital. There is one, for instance, of the Hotel Dieu in Paris. Reports show most clearly to what depths of misery the people must have fallen to accept the shelter of this pestilent hospital. In it were 2,500 beds, but during the winter season as many as 5,000 patients were in the building at one time. This involved the placing of several patients in each bed, and they were frequently arranged in tiers, one above the other, so that some were reached only by means of a ladder. There were no means of heating the wards of the hospital and such heat as there was came from the closely packed bodies of the patients. The mortality, as may be supposed, was excessive. There was one death out of every four patients that entered the hospital, and as that included those that were a little ailing, the insane and the maternity cases, some idea may be obtained of the frightful sanitary condition of the wards. Statistics of that period are unfortunately wanting, but it has generally been supposed that, as a rule, those who submitted to an amputation of a limb died of blood poisoning. Naturally, under these circumstances, surgical operations were few and far between. Nobody was willing to submit to such an ordeal unless absolutely compelled to do so by the necessities of the case. During war time, when these hospitals were crowded even beyond the limits which have been described, hospital diseases, as they are called, were frightfully prevalent. These included such affections as hospital gangrene, erysipelas, and blood poisoning. During the wars of the French Revolution and in the Napoleonic wars, surgical experience in these diseases was enormous. Extensive epidemics claimed thousands of victims. Nor were they confined entirely to hospitals, for history says that in the latter part of the last century and the beginning of this France and Great Britain were swept by epidemics of erysipelas, and about the middle of this century a most widespread and virulent form of that disease appeared in this country, carrying off thousands of victims in the New England States. It also prevailed in New York and Pennsylvania, spreading from village to village.

"It not only required a great deal of courage and resolution on the part of a patient to enter one of the great hospitals of France and England during the opening decades of the present century, but the terrible ordeal of the operation itself was alone sufficient to make the stoutest heart quail and the dread of what was to follow made the more intelligent naturally shrink from the risk which they were about to run. The Massachusetts General and the Pennsylvania hospitals were the only two large hospitals in this country in 1820. In civil life surgery was limited to 'operations of necessity,' and it was only after much persuasion and intelligent reasoning that the sufferer could be placed in such a state of mind as to be anxious for relief by the knife.

"During the first decades of this century improvements in surgery consisted principally in the development of a skilful technique in the handling of surgical instruments and in the dexterity and rapidity with which the operation should be performed. The great masters of surgery acquired wonderful skill in these principles and were enabled to this extent to mitigate the sufferings of those who were obliged to undergo surgical operations. The art of surgery had reached about this stage at the time when the use of ether was first introduced to relieve pain during surgical operations. Previous to the operation at the Massachusetts General Hospital on Oct. 16, 1846, surgery had been, as the elder Bigelow said, 'at all times agony.' The moment that it had been clearly established that an agent had been discovered which could relieve pain in surgery, the days of anxiety which had visited patients and their medical advisers previous to an operation, were immediately swept away, and the problem of the relief of surgery became vastly simplified. Holmes said of this sublime discovery: 'The knife is searching for disease, the pulleys are dragging back dislocated limbs, nature herself is working out the primal curse, which doomed the tenderest of her creatures to the sharpest of her trials; but the fierce extremity of suffering has been steeped in the waters of forgetfulness and the deepest furrow in the knotted brow of agony has been smoothed away forever.'

"The result of this great advance was that surgical operations increased in number. There was an activity in the operating theater in times of peace that had never before been known. Numerous operations were now performed which had never been attempted.

"But with great increase in surgical activity came a corresponding increase in the diseases which have been from time immemorial regarded as hospital pests and the inevitable accompaniments of surgical practice. It is true that then many operations could be performed in the country in private practice with results equal to those which are seen today. The country doctor could tell of triumphs in the healing of the wounds of his patients which the hospital surgeon rarely had an opportunity to observe. Among the scientific men who were attempting to solve the problem of bringing about ideal results that were obtained only in exceptional cases, was Sir James Simpson of Edinburgh, with his thoughtful and suggestive papers on hospitalism, and whose name afterward became so famous in connection with chloroform. On the breaking out of the civil war the art of hospital construction received a new impetus. It was thought that, by improving the atmospheric conditions, hospital epidemics could be more effectually controlled. Old buildings, which had served for years, were torn down and new and commodious pavilions took their places. During the civil war, however, notwithstanding the perfection to which this system was carried, epidemics raged with all the freedom which they had in the campaigns of France and Russia and in the naval combats of the last century. The writer can well remember at this period the epidemic of hospital gangrene in the Massachusetts General Hospital, itself a hospital which even at that time had a world-wide reputation for neatness and efficiency and a proper regard for the principles of hygiene. So formidable were its ravages that all surgical operations were for some time abandoned. The only method that existed at that time for controlling such eruptions of diseases was the system of isolation, as carried out in separate or pavilion wards, or by the removal of patients to tents in the open air.

"Anesthesia had already been in existence for twenty years when the first scientific attempts to control the infectious diseases of surgery were made. As has already been stated, it was known that under extraordinarily favorable conditions, a large wound might heal by what is called 'first intention'; that is, if it had been closed by stitches, its lips became firmly united together without any intervening period of inflammation or suppuration. The rule, however, was that, after a few days, inflammation would make its appearance, the edges of the wound would reopen and an extensive discharge of matter would take place.

"The wound in such a condition, although it might heal eventually by what is known as granulation, was susceptible to the various hospital diseases. It was to solve this problem that Joseph Lister, in 1867, first published his experiments on the antiseptic treatment of wounds. This event marked the beginning of a second great epoch in the history of surgery. The work which Lister presented to the profession was far from being appreciated at that time and was received with distrust and even with contempt. The man who would claim to heal wounds without suppuration was a visionary. Lister's work at Glasgow was received with much skepticism in London. He was a young and active surgeon at the full tide of life and he realized the great disadvantage under which a surgeon labored; so he was the first to appreciate the work of Pasteur and to make a practical application of his theory in regard to the chemical changes taking place in fluids during the process of putrefaction and applying them to the processes of repair in wounds. Lister's early attempts, looked upon at the present time, may be regarded as crude and imperfect. He succeeded, however, not only in arousing the interest and enthusiasm of the first scientific minds in the profession, but subsequently the principal workers. It is truly said that he did not expect his contemporaries to accept his theories, but he looked for the coming generations to evolve to their final perfection the theories which he had framed.

"So it has proved, and it was not until another twenty years had passed and a new generation of surgeons had grown up to take the place of those who had seen the beginning of antiseptic surgery, that surgery reached the perfection that it has today. More than one great teacher in former years has proclaimed that surgery had already reached this point. Is it there now? Who can tell what the greater surgery of the future is to be?"

The Intrusive Drug Drummer Abroad.—Under the caption "Samples," the editor of the London *Lancet* makes note of the pushing ways of the pharmacists' commercial travelers of the British Isles as follows:

Trade does not languish in our days for the lack of enterprise; excess of zeal rather than the want of it is its characteristic. That this condition is natural and in a sense even commendable need not be disputed so long as the methods employed are proper and the products for exchange are worthy of their professed reputation. Unfortunately, each of these needful provisions are frequently ignored in certain transactions which possess a commercial interest for the medical profession. The former of them was conspicuously disregarded in a case which was recently settled by a litigation in a county court. The defendant, a medical practitioner, successfully vindicated his action in refusing to pay for goods left with him by the agent of a firm of drug merchants as samples of their manufacture. How such an error came to be committed as to make a demand for payment under the circumstances it is not easy to understand. The second desideratum to which we have alluded—an article deserving of the position claimed for it—is likewise not infrequently absent where novelties in medical treatment are concerned. It is not, therefore, surprising that to most of our fraternity, and especially to those in busy practice, the pharmacist's traveler is not a too welcome visitor. His name is legion, his words not few, and his wares often merely ready-made prescriptions not suitable for general use, in fact, ordinary patent remedies. The medical profession, happily, has not yet sunk so low that its members need ask for aid from without in their own special business of prescribing, and they can hardly be expected to exchange for this responsible function the insignificant rôle of the mere promoter of nostrums. Yet this, it would appear, is what is expected of them. What is required in medical practice is not an armament of the phials or the preparations of some particular druggist, but a knowledge and a supply of the most efficient means of treatment, whether of drugs or no, and a competent body of properly trained pharmacists as dispensers.

Eucain in Urological Practice.—The *London Therapeutist*, August, quotes Goerl, of Nuremberg, as favoring the use of eucain hydrochlorid as an aid to cystoscopy. The first case wherein he used this substance was one of vesical tumor. An anesthesia similar to that of cocain was obtained, ample for cystoscopic purposes, but the patient complained of a burning sensation in the bladder, which was still present when the anesthesia had developed and cystoscopy was about to be performed. After the operation there was a severe hemorrhage. As with similar patients the use of cocain did not increase slight hemorrhages existing for years, the above result could only be due to a hyperemic effect of eucain. This corresponds with the observation of Vollert (*Münch. Med. Wochenschrift*, 1896, p. 516) that eucain causes slight hyperemia of the conjunctival and ciliary vessels. "Next time I employed eucain was for anesthetizing the bladder of a patient in whose urine I had found tubercle bacilli, and cystoscopy had been determined upon to discover whether there were vesical complications or simple renal tuberculosis existed. This patient also complained of a burning sensation, although complete anesthesia was effected. The prolonged anesthetic effect of eucain was in this case extremely favorable. Whilst generally more or less severe pain is felt, according to the sensitiveness of the patient, at the first urination after the cystoscope examination, in this case the patient felt no discomfort when he urinated half an hour afterward. In both cases a ½ per cent. solution of eucain hydrochlorid was used. Seven or eight cubic centimeters of the same solution injected into the urinary canal sufficed to bring about complete anesthesia. The anesthesia is certainly preceded by a burning sensation that lasts for a half to one minute, but in spite of this slight disadvantage, eucain is always preferable for producing anesthesia in the urinary canal, as it is just with cocain injections into the urinary canal that so many contretemps and even fatal consequences have been experienced. Moreover the extent of the operations usually effected in the urinary canal is generally not sufficient to warrant risking the danger of cocain poisoning. One advantage is also patent to the practitioner, that eucain is unaltered by boiling with spring water, so that sterile solutions can always be prepared extemporaneously and without the addition of any antiseptic. Besides, as far as experience goes, eucain is non-poisonous in doses up to thirty grains."

PRACTICAL NOTES.

Hydro-therapeutics of Tuberculosis.—Winternitz reports 160 cases treated, with 27 per cent. improved or relatively cured, and a still larger percentage, 32 per cent., in his latest series of 229 cases. The principle of the treatment is the general toning up of the system by the hydro-therapeutics, and the resulting increased power of resistance to the disease. He does not claim for it anything more than this.—*Journal d'Hygiène*, October 29.

Venesection in Nephritis.—Baccelli thinks that the importance of the venous stasis in the early stages of nephritis is not generally realized. It is his practice to relieve the pressure in the vena cava inferior by opening the dorsal vein in the foot and withrawing 300 grams of blood (adult), repeating the operation if there is reason to believe that the renal stasis still persists. —*Gazzetta d. Osp. e d. Clin.*, October 29.

Effect of Antipyrin on the Kidneys.—To solve the question of the effect of antipyrin on the circulation and the secretions of the kidneys, Cardi and Vallini have been conducting a series of experiments on animals, from which they deduce the conclusions that it acts directly upon the renal blood vessels with a constricting effect, while it increases the general pressure of the blood, but only slightly and transiently. The central nervous system is not included in the vaso-constriction. It is accompanied by a diminution in the renal secretions, which is not transient but persists for quite a while.—*Gazzetta degli Osp. e delle Clin.* October 29.

Ozone in Treatment of Tuberculosis.—Labbé and Oudin are much encouraged over the results of their treatment of tuberculosis with inhalations of ozone. In two months there was a constant increase of oxyhemoglobin, increased numbers of red corpuscles, increase in weight, increased respiratory capacity, with rapid improvement of the functional symptoms, cough,

etc. Out of the total of 38 cases treated, they consider 7 cured in the first degree, 6 in the second, and 16 showed marked improvement, 6 died. They add that their patients all lived in unhygienic surroundings, and had no other treatment, and that the winter was long and severe. The inhalations were only administered fifteen minutes a day, and they expect much finer results with more comprehensive treatment.—*Presse Medicale*, October 24.

Treatment of Goitre with Thymus Preparations.—The Breslau clinic now has a record of thirty observations, which include Mikulicz's ten cases previously reported. No inconveniences were observed from its use. All the cases of goitre were submitted to it, even those in which no benefit could have been expected from the thyroid extracts. In twenty cases the treatment was successful; the goitre not only diminished perceptibly in size, which was confirmed by exact measurements, but also the subjective disturbances, the difficulty in respiration, etc., disappeared. The success was especially striking in two cases in which operative treatment would have been very perilous. It is noteworthy also, that in many of the cases previous thyroid treatment had not only failed to relieve, but had produced a distinct change for the worse. A complete recovery in an anatomic sense was only realized in two cases. The cases successfully treated included persons 49, 52 and 70 years old. With the exception of one case in which there was a combination of nodular and diffuse parenchymatous struma, the successes were all attained in cases of pure diffuse hyperplasia. The ten unsuccessful cases were five nodular goitre, and five diffuse struma. Four of them were under 20. In some cases fresh, chopped thymus from sheep was given, spread on bread, and in others thymus tablets from London (B. W. & Co.), which correspond to 0.3 grams of the fresh substance. Both were of equal efficacy. The dose of the fresh gland was from 10 grams three times a week, to 30 grams, but the larger doses did not seem to produce any more rapid effect than the usual quantities, 10 to 15 grams.—*Centralbl. f. Chir.* October 3.

The Dosage of Nitroglycerin.—Dr. W. L. Armstrong, *Medical News*, October 31, calls attention to the fact that little has been said in medical literature on the effect of the condition of arterial tension in modifying the physiologic and therapeutic action of nitroglycerin. That the continued use of the drug creates a tolerance had been noticed by Hare and others; sometimes very large amounts have been recorded as having been well borne. Dr. Armstrong carried out in St. Luke's Hospital, New York, three series of experiments; the first on six patients with normal hearts and arteries, and found that in these a total dosage of one-fifth of a grain in twenty-four hours would suffice to produce poisonous symptoms. The second experiment was really only the fortunate observation of an accident. A patient with well-marked atheromatous arteries took by mistake $2\frac{1}{2}$ grains at one dose without any uncomfortable results. The rigid arteries, Dr. A. explains, refused to relax and the poisonous action failed. The third series was tried on patients with marked arterial tension, one a case of asthma; the other of nephritis. In these the daily dosage was within thirty days gradually carried up to 76 and 125 grains respectively not only without uncomfortable symptoms, but with decided benefit, though this last was obtained before the extreme dose was reached. Dr. Armstrong offers the following as his deductions from these observations: 1. "It is only when dealing with arteries in which there is no more than the normal tonicity of the walls that the drug is liable to produce disagreeable effects. Under this condition it should be administered with caution and in small doses." 2. "In cases of arterial tension, the drug can be used more freely than has been customary among practitioners, the dose being proportioned to the degree of tension. 3. "In cases of arterial tension, tolerance to the drug is rapidly acquired, and by a slight increase day by day, very large doses can soon be taken with safety, the constant guide being the degree of tension in the arterial wall."

In a subsequent (November 14) issue of the *Medical News*, Dr. D. D. Stewart calls attention to previous reports by himself of a case where 20 grains of nitroglycerin had been taken daily and to the fact that he then remarked on the difficulty of the administration of the drug where extreme arterial tension existed. His papers were published in the *Philadelphia Polyclinic* of December 1888, and the *Therapeutic Gazette*, September 1893. He also emphasizes in his note the danger from the use of nitroglycerin from its effect in diminishing the oxygen carrying power of the blood corpuscles, which exists independent of the blood pressure and to which a tolerance can not be acquired. This, he holds, is a real peril with much smaller doses than those mentioned, especially with the long continued use of the drug.

Treatment of Mammary Tumors.—No affection has increased to such an extent in this country as cancer. Williams states that the total number of cases in England and Wales in 1840 was 4,500, while in 1895 it was 40,000. Should all tumors of the breast be operated for fear that they may become cancerous, or should they not be disturbed on women of 25 to 30? Cow answers these questions in the *Revue de Thérap. Méd.-chir.* No. 13, remarking that every mammary tumor is liable to become malignant in a proportion of 10 to 50 in 100 cases. Even with a proportion of 1 to 100, he considers an operation indicated. But aside from the question of malignity, he thinks that there are other and sufficient reasons that justify an operation in every case of tumor; the care and the pains, especially during menstruation, etc. A mild operation puts an end to all these disturbances, if the tumor is not diffuse nor malignant. He considers a previous microscopic examination injurious, as it may produce a rapid surrounding growth of the tumor, or may open a passage for the introduction of cancer cells leading to further infiltration. In actually malignant neoplasms, the pectoral muscle and glands, as also the fat in the axilla, must also be removed. He recommends to first open and excavate the axillary cavity, avoiding thus infecting the depths of the opened mammary tissue, and then remove the whole *en bloc*. This method diminishes the hemorrhage, as all the vessels that supply the tissue involved are ligated. Cachectic cancer patients or patients with generalized cancerous nodules should not be operated upon, except with the strict understanding that it is only a palliative measure, as otherwise surgery is brought into disrepute, and patients with operable tumors are deterred from applying for relief in time. When the pain finally compels the patient to seek relief, it is too late. —*Cbl. f. Chir.*, October 3.

Treatment of Chronic Empyema by Decortication of the Lung.—Decortication does not expose to much risk, and yet it offers the patient the inestimable boon of the use of a whole lung. Delorme stated at the recent French Congress of Surgery that it has now been done in twenty cases, among them one in America (Ryerson Fowler), others in various countries, and four by himself. One case reported from Constantinople, was a whirling dervish with a vast pyopneumothorax consecutive to a deep breast wound. The lung was easily loosened, when it filled at once the thoracic cavity. He left the hospital cured in twenty-six days, and his respiration since has been normal even when he performs his violent religious exercises. Another case was a child of 11, in a most precarious condition caused by chronic empyema following an attack of pneumonia. Several ribs were resected and the lung decorticated, resulting in permanent cure. The only means of determining the indications for the operation are to proceed straight to the lung and the membrane, and inspect them *de visu*. When the membrane is exposed at one or several points, it can then be deter-

mined whether it is possible to separate it or not. In the latter case a different operation is indicated, the modified Estlander, but in the former case decortication is performed, and the probabilities are that the loosened lung will expand and fill the cavity. The operation should not be attempted if the lung is found full of small superficial, tuberculous cavities. Delorme believes that decortication is destined to attain an important place in the therapeutics of chronic empyema, which otherwise baffles the surgeon. He considers it superior to thoracoplastic methods, as it surpasses them in its aim, which is to restore the lung to its functions. It is indispensable to disinfect the entire cavity with non-toxic antiseptics for several days beforehand. Extensive lavages reduce the chances of infection during the operation to the minimum, and cleanse out the pus which is apt to accumulate in the costodiaphragmatic angle. No special instruments are required, only those usual in costal excisions, with long, strong, steel grooved sounds, a tendon detacher, a spatula to loosen the membrane, a large right hand pair of Bauden's tonsil forceps, and a pair of pedicle forceps to arrest the flow of blood if necessary, ovariotomy forceps for seizing and pulling the membrane, polypus scissors to excise it, a large pair of hemostatic forceps, and curettes of various sizes, one extra large, shaped like a spoon, with a long handle, to clean the walls of the cavity. All these instruments should be long on account of the depth of the lung, and the edges should not be sharp, but almost dull, to avoid injury to the organs. The peculiar delicacy of the operation requires abundant space to work in, and he therefore advocates the thoracic "*volet*" or trap door, instead of the parietal breaches left by the excision of some of the ribs, which do not afford sufficient working room. The location of the *volet* must be determined by preliminary examination with the sound and finger, and if necessary, a part of the rib above the fistula can be resected. This preliminary examination avoids the dangers of wounding an adherent lung. Although the shock has never yet been severe, or more than in an Estlander operation, still it is best to reduce to the minimum the length of the operation and the amount of hemorrhage. The *Bulletin Médical* of Oct. 25, 1896, contains Delorme's additional minute directions how to proceed with the least waste of time and the least danger of injury to the organs. His first announcement was published in the *Gaz. des Hôpitaux*, Jan. 25, 1894.

Silver as an Antiseptic.—The JOURNAL reported June 27, page 1282, Credé's announcement of the value of silver as an antiseptic for wounds. He now confirms his early announcement with a report of his successful experience in 1,900 cases in which he has used it exclusively since he discovered last December that the lactic acid generated by pathogenic microbes forms a lactate in combination with the silver which destroys the microbes. He prefers it to asepsis even in those cases where absolute asepsis is possible, as it is much simpler, shorter, less laborious, less expensive and more certain, while equally favorable results are insured. Less time is required, as the dressings, bandages, aprons, etc., do not need more than a good washing, and only the instruments are boiled. Labor and considerable expense is saved also in the dressings, as they are much smaller and simpler than those required in asepsis. The gentle but effective action of the silver destroys germs that escape asepsis, and are not certainly killed by any other method. Any normally intelligent person can attend to the changing of the dressings, and even inexperienced practitioners can safely undertake the minor surgical operations with it. A really efficient, harmless and practical antiseptic will prove a great relief and boon to the general practitioner who is now in such a state of uncertainty in his surgical cases as nearly to rob him of all confidence. The laity are educated to the fact that suppuration of a wound is not always necessary, and in order to maintain his reputation he often has to send his patient to some institution or surgeon, when he might just as well have treated the case himself at the residence if he had had confidence in his power to guarantee equally good results. Credé states that this confidence is now insured him by the silver treatment which he describes as follows in the *Cbl. f. Chir.* of October 24: Wounds that he makes himself he covers with silver gauze, whether they are left open or closed, merely dusting the needle holes, possibly with itrol (arg. citric.) to prevent any secondary infection. The gauze is made with metallic silver in the form of the finest powder, and is absolutely unirritating. It can be sterilized, but he considers this superfluous, as it becomes antiseptic the instant pathogenic germs develop in the wound by the lactate of silver which forms in combination with their secretions. Other wounds he cleans with water, soap, brush and ether, including the surrounding parts, rinsing off with boiled water. The wound can also be rinsed with sublimate solution, 1 to 2000, or silver solution 1 to 5000. He only removes completely loosened tissue, and only opens up large underminings, otherwise leaving untouched every crevice, fold, etc., and merely dusting with a thin layer of itrol. If there is already an inflammatory process he applies a "wasserprieszniz," for a few days, but if there is no visible reaction, he merely covers the wound with a little silver gauze, with a layer of cotton outside. If the bandage becomes soaked with the blood and serum he tries to dry it by uncovering the part more often, or else covers it with another layer of cotton, more to improve the appearance than for any other reason. He renews the outer bandage where there is excessive secretion. He is not disturbed at the knowledge that air is in contact with the wound, as he knows that the wound is positively protected from infection. If pathogenic germs had already penetrated into the depths of the wound, at the worst an abscess will develop, which he treats as such. The dressing is not changed if dry, until the fifth to the tenth day. The absence of eczema is notable in comparison with treatment with iodoform, etc. He has never yet observed a case of argyrosis. As itrol (arg. citric.) only dissolves at 1 to 3800, which is a great advantage in the treatment of wounds on account of its prolonged action, he uses tablets of actol (arg. lac.) at 0.2, made like sublimate pastilles and used in the same way. Armed with these and his itrol and silver gauze, the general practitioner is more prepared to meet all emergencies. The silver gauze will keep for years in any climate, without being affected in any way or losing its properties, which promises well for its use in military service. The itrol will also keep an unlimited time in brown or yellow bottles; if it turns brown under the influence of the light, a minimal amount is reduced to metallic silver, which, however, scarcely affects its action.

Credé's silvered catgut and silk threads also keep perfectly. He has described his method of preparing them in his pamphlet on this subject (Leipsic, F. C. W. Vogel) but he offers a sample to all his colleagues with pleasure. His experience with subcutaneous injections of actol in surgical infective diseases is more and more encouraging, but he does not consider himself justified in making any public announcement of this as yet. The dose he administers in erysipelas is between 0.5 and 1.5, and the chief point is not to use a more concentrated solution than 1 to 200, as otherwise the albumin coagulates and produces aseptic necrosis, which prevents the dissemination of the substance throughout the rest of the body, and detracts from its effect. In this respect the technique is still defective. He also states that his observations of the effect of actol in tuberculosis and neoplasms are still crude, although patients treated for a considerable period with the silver salts, applied as a powder to the wounds, or otherwise, present a lively and energetic appearance, like patients who have undergone a protracted course of arsenic treatment. As a gargle and rinsing solution he uses itrol and actol in a 1 to 4-8000 solution, although stronger solutions produce no irritating effect.

THE
Journal of the American Medical Association
PUBLISHED WEEKLY.

SUBSCRIPTION PRICE, INCLUDING POSTAGE:
Per Annum, in Advance $5.00
Single Copies . . . . . 10 Cents.

Subscriptions may begin at any time and be sent to
THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION,
No. 61 Market Street (Occidental Buildings), Chicago, Illinois.

MEMBERSHIP IN THE AMERICAN MEDICAL ASSOCIATION.

This is obtainable, at any time, by a member of any State or local Medical Society which is entitled to send delegates to the Association. All that is necessary is for the applicant to write to the Treasurer of the Association, Dr. Henry P. Newman, Venetian Building, Chicago, Ill., sending him a certificate or statement that the applicant is in good standing in his own Society, signed by the President and Secretary of said Society. Attendance as a delegate at an annual meeting of the Association is not necessary to obtain membership.

On receipt of the subscription the weekly JOURNAL of the Association will be forwarded regularly.

Gentlemen already members of the Association should send their annual subscription to the Treasurer, or direct to the JOURNAL office.

All communications and manuscript of whatever character, intended for publication in the JOURNAL, should be addressed to the *Editor*, and all communications relative to the business of the JOURNAL, proof sheets returned, or in regard to subscriptions, should be addressed to THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, 61 Market Street (Occidental Buildings), Chicago.

Original communications are only received with the understanding that they are exclusively contributed to this JOURNAL.

INFORMATION WANTED.

It would greatly facilitate the prompt delivery of the JOURNAL to those members of the ASSOCIATION living in large cities, if they would kindly furnish this office with their street address in those cases where it is omitted from the wrapper of their JOURNAL, as we have been notified by the postmasters of the larger cities that second-class mail matter not having street address, would be placed in the general delivery to await call.

SATURDAY, NOVEMBER 28, 1896.

LITHOLAPAXY AND A NEW LITHOTRITE.

The fundamental rule of the old lithotrity was that the evil consequences of the operation were in direct proportion to the length of time consumed in instrumental manipulation. It was supposed that the bladder was intolerant of all instruments, and the shortest time possible was occupied at a sitting, the smallest instruments used, and the fragments were left to be evacuated naturally. In 1878, Prof. H. J. BIGELOW of Boston startled the medical profession, and started a revolution in the surgery of the bladder by proclaiming the error of the lithotritists, and by stating that the bladder was far more tolerant of prolonged manipulation than was previously supposed, and that the temporary presence of smooth instruments in the bladder caused much less irritation than the prolonged lodgement of sharp fragments of a calculus. In the pursuance of his ideas BIGELOW formulated a new treatment of stone in the bladder. He availed himself of the discovery by OTIS of the dilatability of the urethra, and introduced an entirely new evacuating apparatus; he also used larger and stronger lithotrites than had ever before been employed, and proposed to remove all the calculi at one sitting. BIGELOW designated his method litholapaxy, and offered it as a substitute for lithotrity and lithotomy.

Despite the opposition and gloomy prophecies of the majority of British surgeons, led by such an eminent authority as Sir HENRY THOMPSON, litholapaxy has steadily grown in favor, and its efficacy has been demonstrated by thorough trial and unquestionable clinical evidence. KEEGAN reports that in the Government Hospitals of Punjab and Bombay alone, there were 7,694 litholapaxies performed in four years (1891–4) with a mortality of only 3.45 per cent. All ages and all conditions are included in these statistics. Convinced by KEEGAN's reports and by his own experience in adults, notwithstanding the fact that he had successfully performed 145 lithotomies in male children without a single death, FREYER resorted to litholapaxy in such cases, and after performing the operation 165 times says: "The greater my experience of litholapaxy in male children the more am I fascinated by the operation. In most instances the little patient may be seen playing about the day after operation, untroubled by any urinary symptom." In all recent statistics the marked disparity between the mortality after cutting operations and after litholapaxy is significant and convincing proof that litholapaxy is a firmly established practice, and that save in very exceptional cases it has completely replaced all forms of lithotomy. The small percentage of cutting operations made necessary by such conditions as encysted calculi, enlargement of the prostate, and the coëxistence of some vesical neoplasm, is well shown by the experience of FREYER, who has possibly advocated litholapaxy more than any other living surgeon. He found that of 300 operations for stone only six lithotomies were necessary, litholapaxy being feasible in all the other cases, and moreover, he adds, that with his present knowledge, in several cases treated by lithotomy, he would have resorted to the later operation.

In the final establishment of litholapaxy as the rational treatment of stone in the bladder, after such persistent and obstinate condemnation of many men of eminent reputation (THOMPSON even denying that BIGELOW had suggested either an innovation or an improvement), we find a double tribute, first, to the superlative merit of BIGELOW's discovery, and second, to the perseverance of such surgeons as KEEGAN and FREYER, who by their courage of conviction, regardless of denunciation, justified their belief and definitely proved for all time the advantage of litholapaxy over all other methods.

Viewing the present status of litholapaxy it seems that the only room for improvement lies in increased mechanical perfection of the instruments employed. Formerly calculi were vaguely called "very hard," "hard," "soft," etc., but never any exact classification attempted; and the operator was entirely dependent on a guarantee of careful forging in using the lithotrite, never knowing when he had exceeded its strength, or when it would bend or break, and become worse than useless.

In an address before the American Surgical Association, June 1, 1894, Prof. WM. S. FORBES of Philadel-

phia presented a testing apparatus designed by his son, MR. JOHN S. FORBES, a mechanical engineer. With this machine he had been enabled to record the exact resistance in pounds offered by each of 184 calculi, indiscriminately gathered, of all sizes from a few grains to 6½ ounces in weight, and of vastly different chemic composition, specific gravity and age. He was also able to measure the crushing power of the lithotrite employed. FORBES prepared an elaborate table of his results, and by combining his anatomic and surgical knowledge with the mechanical skill of his assistant, he constructed a lithotrite which though weighing no more than BIGELOW'S and THOMPSON'S, by meeting the anatomic conditions and conforming to laws of mechanics, eliminates the defects of the older instruments, and is vastly more effective.

FORBES found that the greatest resistance offered by any calculus was 406 pounds. It is but fair to say that this stone was composed of oxalates, and had considerably hardened by many years' exposure on a museum shelf. His lithotrite had broken 184 calculi in the testing apparatus, had been subjected to a pressure of 500 pounds between the jaws on 13 distinct and separate occasions, and after this trying ordeal its ultimate strength was 650 pounds; moreover after this enormous pressure the instrument was closed and could have been introduced and withdrawn from a human bladder with ease, and without injury to the parts.

The value of such experiments is manifestly evident, and the manufacture of a perfect instrument capable of crushing any stone in the bladder is resolved to a simple question of mechanical ingenuity, an element of construction heretofore but indifferently used.

Besides his carefully and impartially conducted experiments, FORBES has demonstrated the fitness of his lithotrite by twenty-one operations on the living subject, one of which is reported in another column of this JOURNAL.

Limits of space prevent a description of the FORBES lithotrite, suffice it to say that its greatest advantages are its strength, and the fact that it is tested in the apparatus before leaving the maker's shop, and its exact crushing strength recorded on the handle. Its jaws are so constructed that injury to the bladder, impaction and flying fragments are avoided. There is perfect ease of operation, yet few surgeons will be able to exert sufficient manual force to render the larger sized instruments inoperative. If necessary for experimental work, an exact power-recording mechanism can be adjusted to the screw handle. Mr. FORBES has designed such an attachment. It seems as though with the improved lithotrite that the indications for litholapaxy are increased, and surely the mortality must be still lessened.

Let us have a Department of Public Health!

APHASIA OF THE HAND.

The seat of language, or rather of ordinary motor speech, has generally been held to be in BROCA'S convolution or the foot of the third frontal, and the lesion of aphasic disorder of the motor type has been considered as there located, at least in right-handed subjects. The expression of and communication of ideas is, however, not strictly confined to speech, and we have therefore among the different species of aphasia an amimia, or lack of capability of expression by signs, and agraphia or inability to do the same by writing. This last has been called by CHARCOT "aphasia of the hand," a term that has a certain appropriateness, but which lacks the essential element of aphasia in that writing is an indirect and accessory method of the conveyance of ideas, not the important and primary one. The real and only aphasia of the hand properly so-called, as Professor GRASSET says in a recent article in *Le Progrès Médical*, is that of the deaf mute who expresses his faculty of language by the fingers instead of the muscles of articulation. The cases of this kind are, as he remarks, very rarely reported in medical literature, and that which he gives has therefore rather more than an ordinary interest and importance.

The patient, an intelligent deaf mute, aged 50, was an arthritic subject who presented all the signs of arterio-sclerosis, and who had had for two years the symptoms of a gradually progressive softening of the brain, without initial *ictus*, due apparently to thrombosis of some branches of the left sylvian artery. There was no symptom of sensory aphasia, the hearing had been congenitally absent, and word blindness was lacking. He read easily and understood what was said to him in the sign alphabet. When requested he would point out words or letters on the page very accurately and readily; there was a certain degree of impairment of the intelligence as compared with what he had been, but enough remained to redeem him from any charge of absolute imbecility or dementia. He understood what he read or what was said to him, but was unable to reply as he had been accustomed to with his right hand, though he managed to do so with his left. He was also unable to write, and this disability was complete.

There was no such paralysis of the right arm or hand as would account for the phenomenon, though there was a certain degree of paresis. Neither this nor the impairment of intelligence sufficed to explain the existing defect, and the center of language by the deaf and dumb alphabet seems from this observation to be, in a measure at least, distinct from the motor center for the ordinary movements of the arm or hand. We have here a congenital deaf mute, intelligent, fairly educated for his condition, capable of understanding and of communicating his ideas with his left hand, but absolutely incapable with his right,

which was before his principal organ of language, so to speak. The power of writing, which had never been acquired by his left hand, was completely lost, while the ability of making ordinary coördinated movements with his right hand was retained. There was no statement as to any facial paralysis, as would have been the case had it existed; the paresis is mentioned as involving only the right arm. The question that is so clearly suggested by this is what center for speech was involved in this case. Was it the usual one for motor aphasia in the third frontal, or is it situated at the foot of the second frontal or in the adjacent portion of the anterior ascending convolution, the center for the arm and fingers? The fact that agraphia, which existed in this case, is a common result also of lesions of BROCA'S center would speak in favor of the existence of the lesion in the usual seat, but of course this is as yet only a matter of conjecture, while the attending brachial paresis might suggest the probability of its occurrence nearer the arm center, in the foot of the second frontal convolution in this particular instance.

It is to be reasonably expected that the case will not be lost sight of, and that at some future time this matter will be cleared up by an autopsy. As it stands the observation is almost unique as giving an example of a form of aphasia that has been very little noticed by writers on the disorders of speech.

THE HOODOOED TEXAS.

Old-fashioned sailors have certain cherished beliefs that no amount of argument can dispel. The tar who has "sailed the salt seas over," can not be persuaded that it is anything but flying in the face of that Providence, in which with all his impiety he devoutly trusts, to begin a voyage on Friday, and he quotes the legendary history of the ship *Friday*, whose keel was laid on Friday, which was launched on Friday, sailed on Friday, under command of Captain FRIDAY, and was, as might have been expected, lost on Friday with all on board. Is it consistent to ridicule the old salt's superstition in face of the fact that no young bride in Christendom, nor her doting mother, will deliberately select Friday as her wedding day?

Another of Jack's ineradicable beliefs is that certain vessels are *hoodooed* from the laying of their keels, and have consequently been so imbued with the spirit of evil, that whoever sails in them does so at the risk of his life. The unfortunate *Texas*, whose series of mishaps seems to entitle her to this gruesome distinction, might be supposed to have reached the culmination of her woes, short of her downright disappearance at the bottom of the sea, but even the incredulous may conceive that another chapter to her calamitous history is not at all out of the range of possibilities, and that the mere submergence in a mud bath is not a matter to be lightly considered, when that mud is the living pestiferous slime of the Wallabout, the outpour of the huge sewers debouching in the neighboring waters.

The broken valve may be replaced, the corroded machinery may be polished anew, the saturated fixtures and clothing may be sent on deck to be dried and every accessible part of her interior may be cleansed and wiped free from moisture, but how about the inaccessible nooks and corners, where the befouled waters have deposited their tiny germs to be awakened into morbific action under favorable conditions of temperature developed by steaming, especially in unhealthy climates? Much has been said about the possible injury to the machinery, but we have seen no reference to the possible detriment to the sanitary condition of the vessel by her unclean bath.

It is no simple problem to decide how such a complicated structure as the *Texas* shall be so thoroughly cleansed that there shall remain no hidden nidus for the development of disease germs, and the medical department has the opportunity of conducting on a large scale the experimental methods which have been found effective under restricted conditions. The efficacy of sulphurous acid vapor as a disinfecting agent on shipboard has been established, but we are not aware whether formaldehyde has been used in the naval service. Superheated steam has, however, been the prime favorite of naval medical officers, but it is to be seen whether it will be possible to permeate a vessel of this character with an atmosphere of dry steam, without such condensation of the vapor on contact with the cold iron sides and bulkheads, as to objectionably add to the moisture, or whether it will not be better to direct, by hand, sprays of live steam through small pipes, against every corner of her interior. Every particle of paint will be certainly scaled off, but the operation of repainting will itself be a sanitary measure and the cost a trifle compared with the introduction of disease. Without such thorough cleansing there would be great risk of exposure to epidemic influences in the insanitary climate of the West Indies, especially in and about Havana. Many of the vessels of the old navy, once stricken with yellow fever, were after years of fancied security, following a winter's freezing at a Northern navy yard, the scenes of fresh outbreaks, until they became notorious as "fever ships," and it is easy to understand how much more apt to happen this will be in the case of these great iron hulks.

So the responsibilities of the naval sanitarian increase apace with the development of naval architecture, as in the military operations which are conducted on the grand scale of modern scientific warfare the functions of the medical department become paramount in the conservation of the effectiveness of the personnel—whether it be the intelligent directing officers or the brave, obedient subalterns and privates.

Is not this as true in the civil administration of great cities, where masses of human beings are aggregated? Does not progress in the operations of men depend upon the intelligent direction of these operations in sanitary lines by experienced sanitary advisers?

A CENTURY'S ADVANCE IN PEDIATRY.

An excellent illustration of the advance in pediatry is afforded by a comparison of the discussion before the Chicago Academy of Medicine (JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, Vol. xxvii, pp. 958, 1004) of a single class of neuroses in childhood, with the work of the Swedish pediatrist, ROSEN VON ROSENSTEIN, translated by Dr. ANDREW SPARRMAN and published under the title of "The Diseases of Children and Their Remedies" in 1776. There is but one chapter on nervous disorders of childhood in the book, which is entitled "Convulsions and Their Ten Causes." The chapter opens as follows:

"The nerves of children are very sensible and irritable. They are more numerous in proportion to their bodies than those of a grown person, and as they have many juices or fluids they are so much more softened. They are also covered with a very thin membrane, which makes their sensations so much the greater. For this reason children are subject to starting, and these, at whatsoever time of life they occur, are called convulsions, but when the whole body is affected and the face at the same time appears bluish, it is then called an epilepsy."

A greater contrast than that with the space devoted in the discussion to a single class of neuroses can not well be imagined.

CORRESPONDENCE.

Tablet Medication.

CHICAGO, Nov. 18, 1896.

To the Editor:—I have read with considerable interest an article appearing in the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION, issue of October 31, under the above title. Our particular attention is drawn to a statement which reads as follows: "A very large proportion of the pharmacopeia is made up of substances which can very readily be made into tablets."

In looking through the list of about 1,000 official products eligible for a medicinal administration, we find between eighty and ninety which are suitable for this mode of administration without suffering loss of therapeutic value by manipulation, and a great portion of this number being powdered drugs, such as blue flag, snake root, buchu, etc., which are seldom, if ever, used in tablet form, being almost always represented by the extract.

Possibly if the writer of the article in question had investigated the subject fully he would have said that the pharmacopeia contained many substances listed by the average tablet manufacturer, but, in actual fact, the true substance is not combined in the tablet bearing its label. There can be no doubt that a tablet containing acetanilid pure, bismuth subnitrate, charcoal or other similar stable substances should be as efficacious in tablet form, if properly manufactured so as to effect immediate disintegration, as in any other. Unfortunately, however, there are but one or two out of the large number of tablet manufacturers who prepare this line of products skillfully, and as a consequence most insoluble salts when compressed are made so hard as to be absolutely valueless therapeutically. On the other hand, who would be so foolhardy as to contend that a fluid extract containing sensitive alkaloids or glucosides, having been made by cold percolation and having had the most extreme care bestowed upon every detail of its manufacture could be reduced to a perfectly dry powder almost black in appearance without affecting its medicinal activity?

Take, for instance, such a tablet as we have before us bearing the label of one of our principal tablet manufacturers. The formula calls for aloin 1-5 grain, strychnin 1-60 grain, extract belladonna $\frac{1}{8}$ grain. Aloin is of a bright yellow color, strychnin sulphate pure white, extract belladonna leaves (properly) a beautiful deep green. The tablet before us, however, is something between a chocolate brown and a black, and when moistened makes a brownish black mark on paper. Moreover, the tablet weighs less than 1-20 grain more than the actual drug should weigh.

There is little doubt that the thoughtful practitioner would prefer administering drugs of this nature in a form that has more promise of result than that above described. We believe with our contemporary that a certain class of tablets and tablet triturates could be standardized and adopted by the pharmacopeia, but such a list would properly be very small, compared with the average dispensing counter style of tablet so largely manufactured.

If the skill and integrity of all pharmaceutic manufacturers could be absolutely depended upon, all would be well, but unfortunately, such is not the case and our only safety, therefore, would be in confining our patronage to those few houses whose reputation for excellence of product is undoubted and whose integrity and ceaseless endeavor has placed the standard of such preparations where we need feel no anxiety for their fidelity to label.

WILLIAM L. BAUM, M.D.

103 State Street.

Non-payment of Bills.

CHICAGO, Nov. 19, 1896.

To the Editor:—As the last of the month approaches I size up accounts and am impressed with the fact that the doctor is the first man called and the last man paid. Patients get sick without due financial preparation and consequently the doctor must trust or drop the case, a thing which few doctors are hard hearted enough to do. After recovery the patient soon forgets how sick he was, thinks the doctor did not help much anyway, must have charged for visits made to some other party, etc., and feels as though the bill was too big anyway. Paying an old doctor's bill seems to him like paying for a dead horse. The facts that people usually can not pay at once, and the doctor's kindness, have established the custom of paying doctor's bills whenever the patient gets "a good ready."

I would like space in your valuable paper to suggest that the doctors unite and establish a new custom, that of paying cash, or a promissory note at each visit. No more accounts. We know that while many patients can not pay cash, very few are unable to sign a promissory note. The main advantages of this plan are:

1. We would receive cash or the note at the time the work was performed and when the patient feels grateful and willing to pay. Cash patients very seldom kick about the size of the fee.

2. Immediate cash receipts would be greater because many trust patients would manage to pay cash rather than sign a note.

3. People have greater respect for, and make greater efforts to pay a promissory note than an account, although it is for the same work. They take pride in their name.

4. Patients will pay $2 and take up one of their notes, whereas they would feel ashamed to pay only $2 on an account.

5. Patients can not object to the amount of the debt after they have recovered and have forgotten they were ever sick.

6. Patients would make greater efforts, first to pay cash, and second, to clear up the debt.

7. No bother with bookkeeping.

Let this plan be discussed in the various medical journals and societies and proper resolutions passed. Have these resolutions published in daily papers as news, and each doctor send a circular to his patients. In this way the public would learn what they must do if they call a doctor. Then let us stand firm and demand cash or a note at each visit or drop the case. People would soon become accustomed to the new order of things and offer cash or a note, without waiting to be asked, as cheerfully and naturally as they now tell us they "have no money, but hope to have some soon."

By this means I believe a custom of paying cash or note C. O. D. could be established that would be beneficial to all kinds of business, but particularly so in ours, because we must do our work at a time when our customers are least able to pay and must be trusted.

Yours respectfully,

MAURICE F. DOTY, M.D.

The Controversy over the Harvey Medical College of Chicago.

CHICAGO, Nov. 23, 1896.

To the Editor:—Some time ago a discussion was started in the medical journals in regard to Harvey Medical College of Chicago. In refutation of public statements we simply wish to state a few facts.

The Harvey Medical College of Chicago is an evening school, co-educational, as regards both pupil and professor. It has a graded four year course of nine months each year. The instruction is given from 7 to 10 P.M. Under the present mangement, which has controlled it for the past two years, over 100 students have matriculated, 17 have come up for graduation, and 7 failed to pass the examination. The college has graduated only ten students in the past two years. Of the ten students who graduated, three have diplomas from the Chicago Dental College with medical attendance of one year at Rush and two years at the Harvey. One was from a recognized dental college in Tennessee and attended a medical school in Iowa and spent one year in Harvey. Four students spent four years in the Harvey. One spent two years at the Detroit Medical College, one year at the Harvey and had two preceptors' certificates. One spent his time in a New York medical college and in Rush, with accepted credits from Rush as a senior. This student left Rush for financial reasons, entering the Harvey about January and graduating the following June. This is the student, no doubt to whom the writer evidently uninformed refers as having graduated in six months from the Harvey and from which he generalizes the statement that Harvey graduates students in six months. Does this show a disposition to place the Harvey Medical College in its true light before the public? One member of the Harvey freshmen class entered a prominent day school as a junior while his class-mates were still sophomores in the Harvey. He is now a senior in the day school while his class-mates are still juniors in the Harvey. This surely does not show a disposition on the part of Harvey College to rush students through their course to an easy and early graduation. One Harvey freshman passed the entrance sophomore examination of the Chicago Medical College with excellent marks, as the Chicago Medical accepts credits from no medical school. Harvey College is teaching more than the number of hours required by the Board of Health. What about the so-called standard medical colleges who teach half a day for six months, *i.e.*, four hours a day? Harvey College teaches 648 hours a year, minus the customary holidays, while the six months colleges teach 576 hours a year. What is the difference between four hours a day for six months and three hours a day for nine months? Is not the difference in favor of the nine months?

Harvey Medical College has some of the finest laboratory equipments of any medical college in Chicago. It has forty microscopes and forty individual laboratory desks with plate glass tops prepared especially with reference to bacteriologic work. It has a stereopticon lantern worth $300. The laboratory equipments in the Harvey are valued at $3,500 to $4,000. The practical anatomy rooms have all asphalt floors with special drains. In the storage room the bodies are embalmed and each laid away on a shelf until needed for dissecting and other purposes.

In a conference of medical colleges in regard to entrance examination of students by a State board independent of colleges, the Harvey representative was the only one who unreservedly favored this change. It was stated that many students graduate at the Harvey without having witnessed a single capital operation at the college. Where is it customary to make capital operations in the colleges before students? Are not such operations generally performed in affiliated hospitals? To my own certain knowledge dozens of capital operations have been performed before the Harvey College classes in hospitals affiliated with the college through the faculty members. The fact is that every one of the graduates of the Harvey Medical College saw many capital operations in the Harvey Hospital which was in the former college building.

It was also stated that "the facilities of the school are of the most limited kind." This statement is absolutely unfounded in fact. The school occupies three floors of a large building expressly arranged for the use of the college, after designs approved by the directors and the building has been named after the Harvey College and is now known as the Harvey Building in all real estate records.

Who are the teachers connected with Harvey College that they should be agents of a "diploma mill"? Does Dr. Eckley need to be advertised as anatomist? Is Dr. Clevenger not known by his writings and teachings? Dr. Evans of the P. and S. taught pathology last year. Dr. Coulter teaches rhinology, Dr. Lucy Waite teaches gynecology and Dr. Knapp is in charge of the laboratory. In short the faculty consists of a body of fifty reputable men and women, who are giving intelligent and thorough modern medical instruction.

In regard to the sensational statement that men and women are induced to leave the "work-shop and stock-yards, where they slaughter cattle, for the more remunerative occupation of slaughtering mankind," we leave to the good sense of the medical profession. Was not Lincoln a rail-splitter? Does this age impale men and women for previous condition of servitude? Beside, the time of the day in which a fact is acquired does not alter the value of the fact. Respectable and reliable knowledge can be acquired after sundown.

The article states that it is the purpose of Harvey Medical College to defeat the Medical Practice Act. Do the facts which I have presented go to prove such an assertion? On the other hand I wish to state emphatically that Harvey College has one of the most systematic and detailed four-years graded course in Chicago.

These facts can be ascertained by anyone with sufficient interest to investigate. Searching examination and investigation is invited at the Harvey College. Senior students in the Harvey have obligatory day-time work. During the past two years every senior saw one or more labors. In 1896 and 1897 in Harvey Medical College every senior will be obliged to witness at least ten labors. In general, what medical school does more for its students? In the light of the above facts, does Harvey College appear to be a "diploma mill"?

Who conferred the power of judgment on the writer in the

Western Medical Review hundreds of miles away to announce that there are eighteen medical colleges in Chicago, and of these seven ought to be recognized and no more?

The management of the Harvey College have never considered it necessary to answer unfounded and unreliable public utterances, that its methods of teaching are no secrets, but open to public scrutiny. But since I am a teacher of gynecology and abdominal surgery in the Harvey College, I take the opportunity of laying before the innocent the above facts, so that the appearance of evil may not arise.

Again, I would request those journals which have entertained the ideas contained in the heretofore published articles in regard to Harvey College, to copy this article in the interest of truth and justice. Respectfully,

BYRON ROBINSON, M.D.

The Physician as a Patient.

TECUMSEH, MICH., Nov. 18, 1896.

To the Editor:—Why is it, that an error in diagnosis is so frequently made when the patient is a physician? Within the past thirty years, a number of cases have come under the writer's observation, where an error in diagnosis has been made, and where the patient has been a member of the medical guild; it therefore has occurred to the writer, that if the patient had not been a member of the medical profession the mistaken diagnosis would not so frequently have been made.

Recently a case illustrating the above statement was reported to the writer, as follows: A physician, age about 53 years, had been complaining for a few days with a feeling of general malaise, some fever which increased from day to day, until the patient was taken to bed. A neighboring physician was called to attend him, who diagnosed the case as malarial fever complicated with rheumatism. As the disease progressed, and the condition of the patient did not improve, a second physician was called in consultation, who appears held similar views to those of the attendant. One or two physicians of the town were casually met by the attendant, and invited to see the patient, and "cheer him up," but declined being placed in the position of a layman. The condition of the physician becoming critical a third physician from a neighboring town, "eminent" (according to the local press), was called a few hours previous to the death of the patient. About twenty-four hours after death, a postmortem examination was made upon the body, and the pathologic lesions of typhoid fever presented, consequently the case was immediately reported to the local board of health as death from typhoid fever. A recognition of typhoid fever, and treatment accordingly adopted at an early stage of the disease might have produced different results; however it certainly would have been more satisfactory to the attending physician, unless he is so far behind the age as to believe that typhoid fever is frequently dovetailed into malarial fever. This and similar cases should lead the physician when called upon to attend a brother physician, to examine him as carefully as an ordinary patient, and never permit the views of the physician patient to bias his judgment in forming a correct diagnosis.

Respectfully, J. F. JENKINS, M.D.

"Parasite and Host."

PHILADELPHIA, PA., Nov. 18, 1896.

To the Editor:—In reference to the paragraph in your editorial of November 14 "Parasite and Host," in which you allude to the abuses of the review columns of lay-published medical journals, an instance has just come to my knowledge too opposite to be omitted: The publishing house of one of our most self-righteous and "honorable" journals recently got the author of a book to review the later work of a rival author upon the same subject. Instead of the review appearing after the usual and necessary lapse of time required to weigh and value the work judicially, it came out in the next issue of the journal after the book had dropped from the press, and was made up of snarling, fault-finding bumptiousness, derision and superficial disingenuousness. The rival publisher and rival author joined hands and danced in murderous joy over their powerless foes—but what a spectacle of ignominy!

Yours, etc., M.

Treatment of Neurasthenia.

KEY WEST, FLA., Nov. 18, 1896.

To the Editor:—In your editorial "Physiologic Treatment of Neurasthenia," October 31, you say, "The patient should also be instructed to sleep on his side (this may be accomplished by having him bind a cigar box on the back, or by tying a towel about the waist with the knot behind), etc."

Allow me to suggest a way that I have found more successful and comfortable in several instances. Let the patient tie a strip of soft but strong cloth to one side of the bedstead; lie on his left side (for instance) on the other side, extend his right arm to its full length across his body and fasten the right wrist with the free end of the cloth. It will be impossible for him to lie on his back, yet have plenty of freedom in other positions.

Yours truly,
G. R. PLUMMER, M.D.

Information Wanted.

BROOKLYN, N. Y., Nov. 21, 1896.

To the Editor:—Who was the writer of the following lines? Can any of our readers cite for an inquiring friend their place of publication?

"God and the doctor we alike adore,
But only when in trouble, not before.
The trouble o'er, both are alike requited;
God is forgotten, and the doctor slighted."

R. M. W.

Location Wanted.

Nov. 12, 1896.

To the Editor:—Will you please send me such a list of desirable vacant locations for a physician as you may have at hand, or give me any other information you may have concerning desirable locations. I am a graduate of the College of Physicians and Surgeons of Baltimore, and have had some practice at Indianapolis, Ind.

Thanking you in advance for any favor you may be able to do me, and assuring you of my desire to return the same at the earliest opportunity, I remain, yours truly, A. G. S.

PUBLIC HEALTH.

The Importation of Rags.—Dr. A. H. Doty, Health Officer of the Port of New York, has sailed for the Mediterranean ports for the purpose of studying certain sanitary questions. The object of the trip is to enable him to thoroughly acquaint himself with all the details regarding the precautions taken in the various Mediterranean ports to prevent the spreading of contagious diseases. It is the intention of Dr. Doty to attempt to inaugurate a system of baling rags in foreign ports under consular supervision, whereby the United States consular authorities could conscientiously certify to their thorough disinfection. The Health Officer expects to be abroad until the middle of January. In his absence Deputy Health Officer Sanborn, who has been in the Quarantine service since 1878, will have charge of the entire business of the department.

Psittacosis.[1]—Several small family epidemics, resembling pneumonia and proving fatal to all of the elderly persons attacked, baffled the Paris physicians, until they discovered that it was a microbian disease contracted from sick parrots.

[1] See also an article in the JOURNAL, June 15, 1895, page 947.

In each case a parrot had been sick and died in the house. In one case Mr. X. bought three parrots, December 30, and sent one to a friend. This parrot died in a few days, and the friend and her servant were quite ill for three weeks and only recovered after a tedious convalescence. The two parrots kept by Mr. X. died within a fortnight, and he was taken soon after with chills, fever, vomitings, terrible thirst, insomnia, headache, indications of a pneumonic affection in one lung, tremor, carphology, delirium, coma and death in eleven days. The disease presented the picture of a typhoid fever, without abdominal disturbances, but with an excessive predominance of nervous disturbances. Mme. X. also succumbed in a few days, presenting the same symptoms, but with more decided pneumonic complications. The son was also attacked, but was only slightly affected, as usual in this disease with the young. The microbe was located by Nocard, who described it as a short, thick bacterium, with rounded ends, both aerobic and anaerobic, extremely motile, developing on all the usual neutral or slightly alkalin media. It does not take the Gram, nor liquefy gelatin, nor ferment lactose, nor coagulate milk. It is extremely virulent, and pathogenic not only for the parrot and man, but for mice, guinea pigs, rabbits and pigeons. His report states that keepers of bird stores should be warned against the dangers from sick parrots, and all owners of parrots should be instructed to isolate them when they show evidence of illness. It concludes with the remark that "the public should be warned that there is a serious and frequently fatal disease communicated to man by parrots. Some persons seem to experience for them a sort of passionate affection, increased by solicitude when they are ailing, and they express this affection by interlingual caresses from mouth to beak. If these caresses are not reprehensible from a moral point of view, they are most singularly so from the hygienic."—*Bulletin de l'Acad. de Méd.*, October 20.

Ohio Boards of Health to Regulate Plumbing.—Under the caption of "An act to promote the public health, etc.," passed in April, 1896, it is provided that any person, firm or corporation now or that may hereafter be engaged in, or working at the business in the State of Ohio, either as master or employing plumber, or as a journeyman plumber, shall first secure a license therefor, application for which is to be made to the president of the board of health or other officer having jurisdiction in the locality where he intends to engage in or work at such business, and the applicant shall at such time and place as may be designated by the board of examiners to whom his application shall be referred, be examined as to his practical knowledge of plumbing, house drainage and plumbing ventilation. In the case of a firm or corporation, the examination and licensing of any one member of such firm, or the manager of such corporation shall be deemed sufficient. In every city and each town of 5,000 or more inhabitants, and in each town having a system of water supply or sewerage there shall be a board of examiners, consisting of the president of the board of health, the inspector of buildings of such city or town, if there is one, two master plumbers and one journeyman plumber. The president of the board of health and the inspector of buildings shall be members ex officio of the board and serve without compensation. The other three members shall be appointed by the board of health, or if there is no board of health, then by the health officer of the city or town, to hold office for one year. If in any city or town there is no inspector the board of health is to appoint a fourth member, and in localities where the required number of plumbers can not be secured, such vacancies may be filled by the appointment of reputable physicians. This board, if satisfied after examining them of the competency of the applicants, shall so verify to the board of health which issues the licenses good for one year and renewable by any board of jurisdiction. The board of health of each such city or town is to appoint one or more inspectors of plumbing to be approved by the city or town council. They are to be practical plumbers and hold office until removed by the board of health for cause, which board is to determine their compensation, to be paid out of the city or town treasury. These inspectors are to inspect all plumbing work for which permits are granted and report to the board of health all violations of law, ordinance or by-law relating to plumbing work and perform any other appropriate duties required by it. The board of health of every such city or town is also to prescribe rules and regulations for the construction, alteration and inspection of plumbing and sewerage placed in or in connection with any buildings in such city or town which shall be approved by the council, and no plumbing shall be done except in the case of repairs or leaks, without a permit issued upon such terms as it may prescribe. Every violation of any of these provisions is punishable by a fine of from $5 to $50. All money derived from the examination of applicants shall go to the board of health at the place where each was examined. Licenses may be revoked for incompetency, dereliction of duty or other sufficient causes after a full and fair hearing by a majority of the examining board, but an appeal may be taken to the State Board of Health.

Serum Diagnosis of Typhoid Fever.—The Health Department of the City of Chicago has issued the following circular:

"Following the action of the Provincial Board of Health of Quebec, by its distinguished bacteriologist, Dr. Wyatt Johnston, to whom due acknowledgement is hereby made, the Department of Health desires to call the attention of the medical profession of Chicago to the fact that bacteriologic methods seem likely to afford a rapid and satisfactory means of diagnosis in typhoid fever which will compare not unfavorably in point of efficiency with the methods now so widely employed for the diagnosis of tuberculosis and diphtheria.

"It has been shown by Pfeiffer of Berlin and Widal of Paris that the serum obtained from the blood of a typhoid-fever patient is capable of so acting upon pure bouillon cultures of typhoid bacilli mixed with it as to abolish the active motion so characteristic of that organism in fluid culture media and to cause an agglutination of the individual bacilli in large groups or clumps. This change is easily recognizable under the microscope or in culture tubes and usually occurs within a few minutes.

"With serum from the blood of healthy persons, or those suffering from febrile diseases other than typhoid, the motion of the bacilli is not arrested but continues indefinitely when mixed with the typhoid culture.

"The method as originally introduced by Pfeiffer involved a somewhat difficult and complicated procedure for obtaining pure and sterile serum; but the process has been much simplified by Widal, who found that a few drops of blood collected in a sterilized glass tube suffice for the test.

"Widal and Sicard state that the serum and blood, when dried, retain their power of producing this effect, though they do not record any practical application of this circumstance.

"It has since been shown by Dr. Johnston that the fluid obtained by moistening with water a dried blood-drop gives the reaction in a prompt and satisfactory manner even after it has been dried for several days. This modification of the process makes it more suitable for a system of free public laboratory diagnosis, similar to that in the case of diphtheria, as a drop of dried blood can be more readily sent to a laboratory and examined there. Dr. Johnston was able to diagnose correctly by means of dried blood-drops sent by mail from Montreal to Buffalo, during the meeting of the American Public Health Association in September, 1896, those which were from typhoid cases and those which were not, using no other means than the method described above.

"It is not yet possible to state exactly what degree of accuracy will be obtained from this method when used for the routine diagnosis of typhoid fever on a large scale, but in order to test the practical utility of the method, the Department offers to examine and report (gratis) upon any samples of blood collected by physicians as directed in the instructions given with the outfits. A report will be sent by 2 P.M. upon the day following that upon which the sample is received and will be communicated by telephone when the number is given.

"In the Department outfits will be found pieces of sterilized mica upon which the drops of blood are to be dried. These

are substituted by Dr. Gehrmann for the sterilized paper elsewhere used, because the smooth non-absorbent surface of the mica facilitates the solution of the dried serum in water. Drops of the solution can also be more readily taken up from the mica than from the paper surface. These outfits, with full directions for use, may be obtained from any drug store antitoxin station, from the sub-laboratory at 43d Street and Cottage Grove Avenue and from the laboratory of the Department, Room 317, City Hall."

Health Report.—The following reports of mortality from smallpox, yellow fever and cholera have been received in the office of the Marine-Hospital Bureau, Treasury Department:

SMALLPOX—FOREIGN.

Rio de Janeiro, October 3 to 10, 10 cases, 6 deaths.
Santiago de Cuba, October 10 to 17, 4 deaths.
Japan, October 10 to 19, 202 cases, 57 deaths.
Guayaquil, October 2 to 16, 4 deaths.
Bombay, October 6 to 13, 1 death.
Callao, October 18 to 25, 4 deaths.
Gibraltar, October 18 to 25, 1 case.
Licata, Italy, October 17 to 24, 5 deaths.
London, October 17 to 24, 1 case.
Madrid, October 14 to 28, 159 deaths.
Nogales, Mexico, November 1 to 7, 5 cases.
Odessa, October 17 to 24, 26 cases, 5 deaths.
Osaka and Hiogo, Japan, October 3 to 10, 125 cases, 43 deaths.
St. Petersburg, October 17 to 24, 9 cases, 1 death.
Warsaw, October 10 to 17, 5 deaths.

CHOLERA.

Japan, October 10 to 19, 7,189 cases, 2,106 deaths.
Calcutta, September 26 to October 3, 5 deaths.
Madras, October 3 to 9, 5 deaths.
Osaka and Hiogo, October 3 to 10, 2 cases, 1 death.

YELLOW FEVER.

Rio de Janeiro, October 3 to 10, 11 cases.
Santiago de Cuba, October 10 to 17, 9 deaths.
Matanzas, October 27 to November 4, 15 deaths.

BOOK NOTICES.

Francis Delafield and T. Mitchell Prudden, a Hand-book of Pathological Anatomy and Histology. Fifth edition. New York: William Wood & Co. 1896.

The knowledge of pathologic anatomy, giving security to the physician at the bedside, has initiated the development of modern medicine; the progress of the latter is in direct parallelism with this study. Where postmortem examinations are scarce the student will not learn the rough pathologic anatomy, and pathologic histology must take the place. Such is the matter of fact in this country; this may be also the cause why this hand-book, written by two of our best investigators, has more a microscopic feature than that it will be the true and careful leader in the study of rough pathologic anatomy. Comprising so much, viz., the whole general pathology, the space for anatomic description seems to have fallen short.

The prominent feature of the book is given by the illustrations, mostly from microscopic preparations. In this report the authors are quite original, but I doubt if their experience is broad enough, relying more on personal observation than on the study of the literature of other countries.

Some references may illustrate this feature. On page 441 is treated that serious form of interstitial pneumonia with formation of granulation tissue in the interior of the alveoli. The authors have said nothing on the occurrence of those forms being found in Europe mostly in connection with insanity. The other forms of interstitial pneumonia identical with the infectious pneumonia of cattle is not mentioned at all. It may be heartily acknowledged that the microscopic illustrations are excellently executed.

As a very interesting observation, may be noted the tuberculous phlebitis, at page 569. In the amebic colitis (pp. 568 and 569) we would have preferred a more schematic illustration instead of the photographic reproduction. A case of appendicitis of twelve hours' duration (of the symptoms) is highly interesting, but the lymphatic nodules in the mucosa may find another interpretation.

The adenoma of the kidney (p. 678) seems to be not rare in this country. We think that it is always congenital, not originating in later years as remark the authors. The differential diagnosis from adrenal adenoma, originating from dispersed adrenal tissues, is not given, but very simple, as these latter forms are situated always under the capsule as a flat yellow mass. The true adenoma originates from the canaliculi of the kidney.

We will close these remarks by some critical words on the chronic nephritis, a part worked out especially by Delafield. As the author, so far as I know, has worked more as clinicist than as anatomist, he seems not very apt with the manifold features given by the pathologic anatomy of this disease. Remarking the important clinical differences that are observed in the scarlet kidney (glomerulo-nephritis), the great white kidney (chronic morbus Brightii), the amyloid kidney (often also great white) and the small red kidney without interstitial proliferation, originating only by alteration of the circulation, we would express the hope that the highly estimated author might revise this chapter.

Tenth Annual Report of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania for the year 1894. Harrisburg: 1895.

This volume has come to hand with a note, stating that: "Owing to the destruction of the establishment of the State printer in the early part of 1895, the issue of this volume has been seriously delayed." On page 5 of the report of the Secretary, is a tribute to the late Dr. John H. Rauch, former secretary and president of the board of health of the State of Illinois, whose work as a sanitarian will ever endure. The contents of this volume are varied and interesting. It opens with the secretary's report and the minutes, and then is followed by the various reports of the different standing committees on registration and vital statistics, legislation, preventable diseases, water supply, drainage, etc., an account of the inspections, the annual reports of cities, towns, conferences and conventions—the whole forming an admirable book on public hygiene. The maps furnished by the State weather service constitute a striking feature of the volume.

The Medical Record Visiting List, or Physician's Diary for 1897. New York: Wm. Wood & Co.

Some changes have been made in this well-known list, and it will, as heretofore, be found one of the most useful.

The contents include: Various tables and summaries, the calendar, estimation of duration of pregnancy, approximate equivalents, posologic tables, miscellaneous facts, emergencies, composition of various solutions in ordinary use, surgical antisepsis, disinfection and other usual record pages. The book is handsomely bound.

The Medical News Visiting List, 1897. Philadelphia: Lea Brothers & Co. 1896.

This visiting list contains the usual material of interest to the physician and tabular matter beside the ruled pages for accounts and professional records, such as "signs of dentition," "to find day of confinement," "thermometric scales," weights and measures (both old and metric), examination of urine, important incompatibles, artificial respiration, table of eruptive fevers, poisons and antidotes, tables of doses, therapeutic remedies, ligation of arteries.

Postmortem Examinations in Medico-legal and Ordinary Cases, with special chapters on the legal aspects of postmortems and on certificates of death. By J. JACKSON CLARKE, M.B., F.R.C.S. Cl., 16mo, pp. 78. London: Longmans, Greene & Co. 1896.

This little manual contains some features that are not included in most works of this kind. The author has described rather fully his antiseptic method of making postmortems, by the use of photographers' gloves, and mercury bin-iodid solu-

tion, which he prefers to the bichlorid solution. There is also a special section on the legal aspects of postmortems, and on certificates of death. We commend the book.

The Physicians' Visiting List (Lindsay & Blakiston's) for 1897. Forty-sixth year of its publication. Philadelphia: P. Blakiston, Son & Co.

This "old reliable" list contains an accurate posologic table, thermometric tables, a chapter on asphyxia and apnea, with convenient pages for records. The fact of so many years' service shows that the book has been greatly appreciated by the profession.

NECROLOGY.

HARRY A. HODGEN, M.D.—The profession of St. Louis and the many friends of Dr. Harry Hodgen were shocked to learn of his sudden death in the month of September. It was known that he had not been in the best of health for some time, but so sudden a termination had not been anticipated. In the prime of life, just when the greatest measure of success was in sight, he was removed from the field of his work. Words are futile to express the personal sorrow over his untimely taking off, and the sincere sympathy of the writer with the loved ones left behind. It has been the pleasure of the writer to know him as boy and man since he was a little tot in short dresses; and no one knows better the many strong qualities of head and heart possessed by him. He never sought to make a favorable impression, but was satisfied to trust to the keen discernment of the worthy for proper appreciation. At an unusually large meeting of the medical profession of St. Louis, held in the hall of the St. Louis Medical Society, to take proper action, the following report of a special committee appointed by the president to present an expression of the society on the death of Dr. Hodgen, was made and ordered published:

Mr. Chairman and Fellows of the St. Louis Medical Society:—Dr. Harry Hodgen was the firstborn of the late Dr. John T. Hodgen, one of America's greatest surgeons; and by inheritance and association was well equipped for the making of a physician. The fact that his father died before he graduated in medicine was a great calamity to him, and yet it did not prevent him from applying himself earnestly and honestly to his chosen life work. He inherited ability from his father, especially along the lines of surgery, and, very happily, chose the department of orthopedics. The profession at large, and his many patients pay tribute to his skill in this specialty. He was earnest, industrious and faithful as a physician, as the head of a family and as a citizen. Ill health had been his constant companion for many years and yet he never complained, nor did he deviate from the straight line of earnest, honest work. His desire to achieve a place in his profession and to properly serve his family, to which he was almost fanatically devoted, prompted him to deny himself the rest and vacation from time to time, which he should have had during many years past. He kept in the harness, hard at work, almost to the last. Physical exhaustion finally drove him to rest, which was soon followed by his sudden death. The medical profession of St. Louis will never possess a member with a keener sense of professional honor and duty, and one who more unselfishly and heroically, although a sufferer, served humanity without regard to his own interests than Dr. Harry Hodgen. I. N. Love, John P. Bryson, Paul Y. Tupper, Committee.—*The Medical Mirror.*

W. W. WELLINGTON, M.D., of Cambridgeport, Mass., October 27. He was born in West Cambridge, now Arlington, in 1814, and was the son of a noted teacher, who gave him an early education. At the age of 18 he was graduated from Harvard College and taught school for a period of two years, at which time he entered the Harvard Medical College, graduating in 1838. He then began the practice of medicine in Cambridge and has since practiced in that city. He was a member of the Cambridge School Board for forty years. He was also coroner for Middlesex County for ten years. He was a member of the Massachusetts Medical Society, an honorary member of the Boston Obstetrical Society, associate member of the Boston Medical Improvement Society and the Cambridge Medical Improvement Society. The degree of A.M. was conferred upon him by Harvard College in 1871.

JOHN RUSSELL MCCLURG, M.D., of West Chester, Pa., November 3. He was a graduate of Jefferson College and he and Dr. Gross of Philadelphia were close friends. In 1864 he was commissioned major and surgeon, United States Volunteers and in this position he remained until the close of the war when he retired with the rank of brevet-colonel United States Volunteers. He gave valuable services while in charge of several prominent hospitals and soon was quoted as a skilled surgeon, which reputation he sustained up to his death. In 1864 he received from Governor Brough of Ohio, in testimony of his services a handsome sword, and on the occasion of its being given to him the late President Garfield, then chief of General Rosecrans' staff, made the presentation speech. It was while in charge of Jefferson Barracks at St. Louis that this pleasant episode in his life took place. Returning to Chester County in 1865 he resumed his former practice, and his continuous term in that line covered nearly fifty-one years. He was the father of the West Chester Philosophical Society and other kindred organizations, and during the past quarter of a century his labors in the fields of science, literature and philosophy were extensive and eminently successful.

JOSEPH C. THOMAS, M.D., of Cincinnati, Ohio, November 18, aged 56.——Henry C. Chapin, M.D., of Lincoln, Neb., November 1, aged 81.——John T. Langan, M.D., of Oswego, N. Y., November 5, aged 40. He was born in Lowell, Mass., and was graduated from the University of Vermont and the Bellevue Hospital.——D. R. Pelton, M.D., of Topeka, Kan., November 4.——Oscar D. Cheney, M.D., of Haverhill, Mass., October 29, aged 55. He was born in Plaistow, N. H., and educated at New London (N. H.) Academy and Dartmouth College, and was graduated from Harvard Medical School. He was a member of the Massachusetts Medical Society and had been in practice in Haverhill twenty-five years.——L. P. Knoll, M.D., of Montrose, Pa., October 20. He was struck by a locomotive.——Richard Beebe, M.D., of Alford, Mass., October 20, aged 72.——Levi H. Thompson, M.D., of Reading, Pa., October 23, aged 73. He was graduated from Jefferson Medical College in 1853.——Henry H. Hollembaek, M.D., of Burlington, Vt., November 5. He was graduated from Jefferson Medical College.

ASSOCIATION NEWS.

Appointments.—President Nicholas Senn has made the following appointments:

Committee on Entertainment of the Members of the British Medical Association who will attend the next meeting at Montreal—The following members of the AMERICAN MEDICAL ASSOCIATION:

A. L. Gihon, M.D., U. S. N.
J. W. S. Gouley, M.D., New York.
S. C. Busey, M.D., Washington.
H. H. Didama, M.D., Syracuse.
Levi C. Lane, M.D., San Francisco.
Henry D. Holton, Brattleboro, Vt.
E. D. Ferguson, M.D., Troy, N. Y.
C. N. Hewitt, M.D., Red Wing, Minn.
I. N. Love, M.D., St. Louis.
William Pepper, M.D., Philadelphia.
W. H. Pancoast, M.D., Philadelphia.
William Osler, M.D., Baltimore.
Donald Maclean, M.D., Detroit.
J. T. Whittaker, M.D., Cincinnati.
R. Matas, M.D., New Orleans.

To deliver the annual address in State Medicine *vice* Jerome Cochran, M.D., deceased, John B. Hamilton, M.D.

SOCIETY NEWS.

North-Western Ohio Medical Association.—The fifty-second meeting of this Association will be held at Defiance, Ohio, Thursday and Friday, December 10 and 11. The following are the officers: President, Charles Graefe, Sandusky; vice-presidents, Charles E. Slocum, Defiance, W. S. Phillips, Columbus; secretary, J. P. Baker, Findlay; assistant secretary and treasurer, T. M. Gehrett, Deshler. There are twenty-five papers on the program and an interesting meeting is expected.

The American Laryngological, Rhinological and Otological Society.—The Western Section of this Society will hold its meeting in Kansas City, Mo., Feb. 2 and 3, 1897. Titles of papers to be read before this meeting should be sent to the Chairman, Dr. Jas. E. Logan, 1208 Wyandotte Street, Kansas City, Mo., before January 15. It is also requested that those who desire to join this society shall send in their names.

The North Central Illinois Medical Association.—The twenty-third annual meeting of this Association will be held in Streator, Ill., Dec. 1 and 2, 1896. Following are the officers: President, Thomas N. Cunningham, Princeton; first vice-president, J. Frank Keefer, Sterling; second vice-president, J. S. Whitmire, Metamora; secretary and treasurer, Wm. O. Ensign, Rutland. There are about twenty papers on the program.

Twelfth International Medical Congress.—An important committee has been formed at St. Petersburg to receive and entertain visiting physicians during the Congress, consisting of the surgeons-general of the army and navy, the directors of various scientific institutions, hospitals, etc., with the Professors Ott, Pawlow, Petersen, Sklifassowski, Tarenezki, Paschutin and Turner. The section of dermatology and syphilography give informally the following subjects as the preference of those in charge. The formal announcement will follow later: Actinomycosis, primary cutaneous tuberculosis, cutaneous sarcomatosis, acanthosis nigricans, pathogenesis of area Celsi, gonorrheal eruptions, malarial eruptions, mercurial eruptions, treatment of scleroderma, treatment of rhinoscleroma. When should the treatment of syphilis commence; how long should it continue; should the accidents be treated as they appear or should the treatment be provisory? Modifications of the figured elements in the blood of syphilitics during the condylomatous period. Treatment of syphilis with soluble and insoluble mercurial injections.

MISCELLANY.

Losing Flesh.—The long, gloomy, operating-room of the hospital is hushed and still; soft-voiced nurses move quickly about; a skilful attendant arranges the cruel looking instruments. Before administering chloroform to the patient, prior to the amputation, the kindly doctor asks him if he has any message for his friends. "Naw!" he murmurs wearily; "jest tell 'em dat you saw me, an' dat I'm losin' flesh."

Some Recent Bequests.—Professor Krassnig, M.D., of Klagenfurt has bequeathed 150,000 florins to found a children's hospital there. It is also announced from Tomsk, that a certain W. Simin has presented the University of Tomsk with 100,000 roubles to establish a bacteriologic institute on condition that the inhabitants of the city of Irkutsk shall always be supplied free with the remedies prepared in it. Mrs. Corrigan of Chicago has given $9,000 to St. Joseph's Hospital.

The Small Boy and the Mustard Plaster.—The small boy had been requested to do some errands, but insisted that he was feeling badly. As the family physician happened to call he felt the boy's pulse and looked at his tongue and said: "You had better make a good strong mustard plaster." The boy looked depressed and left the room. "When shall I apply the plaster?" asked the mother. "Don't apply it at all. He'll get well before that stage of the treatment is reached."

Increased Intensity of the Roentgen Ray.—Buka has succeeded in producing the ray with such intensity that the objects to be photographed can now be stationed quite a distance away from the tube, which allows a much better perspective. He discovered the extreme intensity of the ray by finding that it had penetrated into his zinc box under the heavy table on which the patients recline to be photographed, and had imprinted the zinc handle of the box on six sensitive plates contained in it, one beneath the other.

Diet is the Man.—Basing his remarks on the famous and untranslatable pun of the philosopher, Feuerbach, "Der Mensch ist was er isst" (man is what he eats), a Swiss physician has something to say regarding the favorite dishes of famous men. In a certain sense, he says, the words of Feuerbach are true. There is no doubt that the food eaten has great influence on the temperament of mankind, and that, on the other hand, a man shows certain characteristics in choosing certain kinds of food. When John the Baptist nourished himself with locusts and wild honey, it was just as much in keeping with his character as the preference of Zoroaster for bread, cresses and water.

Hirsch vs. Nordau.—Dr. Nordau has startled the reading world by his cry of "Degeneration"; Dr. Hirsch opposes his conclusions by demonstrating the difference between "Genius" and "Degeneration," and analyzing the social, literary and artistic manifestations of the day dispassionately and with a wealth of suggestive illustrations. In a brilliant explanation of the psychology of genius he shows that Lombroso and Nordau make no distinction between scientific genius based upon hard work and artistic genius; nor between genius and talent. He points to Goethe as an example of a perfectly developed genius. He answers specifically Nordau's claim that this is an age of hysteric disorder, and after an extended, brilliant and informing discusion of art and insanity, in which he shows himself a confirmed Wagnerian, he summarizes his conclusions by absolutely declining to accept Nordau's point of view.—*Literary Bulletin.*

Not Proper Proceeding for Release of Lunatic.—Whatever may be a person's remedy to obtain release from illegal confinement as a lunatic, the supreme court of Pennsylvania says, in re Rust, decided Oct. 5, 1896, it is clearly not a proceeding under a statute intended, through a jury of six and a commissioner, to confine him, and so it affirms a decree dismissing a petition for an inquisition under the Pennsylvania act of 1836, one of the objects of which is to provide guardianship for the person of the lunatic, and its principal purpose is to protect his estate. It should also be noticed that the court declares in this case that it could not for a moment entertain the doctrine that in a great city like Philadelphia, with its numerous hospitals for the detention and cure of the insane, to which annually many unfortunate patients are removed from other States, that the courts are powerless to interfere, because the judicial proceedings resulting in the confinement were had in another State. The writ of habeas corpus, it suggests, is a writ of right intended to protect the individual against illegal confinement at the time it issues, without regard to the legality of the confinement at its beginning.

Retained His Homestead Rights.—A physician purchased thirty-seven acres of farming and pasture land, which he resided on and used for a home from 1869 until the year 1879, when, in order to more conveniently locate himself to practice his profession, he bought a lot in a small village one-quarter of a mile from his home, and lived on it until 1892, when he in turn sold that village property and rented a house in another village for two years, meanwhile either renting out the farming portion of his land every year, or having it cultivated by hired labor, but always retaining for his own use the pasture, and then finally went back to live on that property, with his sister, who composed his family, at the end. Believing that the evidence established that it was not his intention to abandon his homestead rights in that property, but that he always intended to move back to it in the future, if he should not be successful in the practice of medicine, the court of civil appeals of Texas holds, Farmer v. Hale, after a rehearing Oct. 10, 1896, that there was, under the circumstances, no abandonment of the homestead, and on that ground it perpetuates an injunction restraining a sale of the property on execution, levied in 1894.

The new Bender Laboratory at Albany, New York.—On October 27, the formal dedication of this workshop of science took place, being the outcome of a gift to that city by Matthew W. Bender, Esq. The board of trustees, of which Drs. Vanderveer, Hun and Gorham are members, took the keys. Dr. Abram Jacobs of New York, delivered an address on the rise and progress of laboratory research in sanitary science. The institution has been designated the Bender Hygienic Laboratory. It is thoroughly equipped with the most recent apparatus for the study of pathology and bacteriology, and every facility is furnished for acquiring a thorough knowledge of these important subjects. For physicians and scientific men this laboratory will be of inestimable value for the examination of sputum and pathologic specimens. The laboratory is in charge of Dr. George Blumer, late assistant in pathology and bacteriology in Johns Hopkins University. The building stands in a beautiful little park on Lake Avenue in the western part of the city, near the famous Dudley observatory. The structure, which is of fine red brick, is from an architectural standpoint plain, but it has a dignified and, so to speak, scholarly appearance. Inside the building everything is most perfect and complete for the purpose for which it is designed, the study of germ diseases.

Curious Superstition Concerning the Alder.—Dr. Robert Fletcher contributes to the *Bulletin of the Johns Hopkins Hospital*, August, an exhaustive historic compilation on the pharmacology of witches, quoting "Macbeth," Middleton's "Witch," Ben Jonson's "Masque of Queens" and many other old plays and verses. Of the elder tree, he says, there are many odd superstitions connected with it. The "fox-headed Judas," as an old writer termed him, alluding to the color of his hair, was believed to have hanged himself upon an elder tree, and that entirely credible writer, Sir John Mandeville, declares that he saw the veritable tree while in the Holy Land. There is a curious bit of folklore relating to the elder, well known no doubt to the witches, who rode on broomsticks in their night journeys. Coles, in his "Art of Simpling," 1656, says: "It hath been credibly reported to me from several hands, that if a man take an elder stick, and cut it on both sides, so that he preserve the joynt, and put it in his pocket when he rides a journey, he shall never gall." Richard Fleckno in his "Diarium" 1658, also tells us:

> "How alder stick in pocket carried
> By horseman who on highway feared [fared]
> His breech should nere be gall'd or wearied,
> Although he rid on trotting horse,
> Or cow, or cowl-staff, which was worse.
> It had, he said, such virtuous force,
> Whose vertue oft from Judas came,
> (Who hanged himself upon the same,
> For which in sooth, he was to blame)
> Or't had some other magic force
> To harden breech, or soften horse,
> I leave't to th' learned to discourse."

In *The Athenian Oracle*, once edited by Samuel Wesley, brother of the famous John Wesley, is a confirmatory story: "A friend of mine," says the relater, "being lately upon the road ahorseback, was extremely incommoded by loss of leather; which coming to the knowledge of one of his fellow travellers, he over-persuaded him to put two elder sticks into his pocket, which not only eased him of his pain, but secured the remaining portion of posteriours not yet excoriated, throughout the rest of the journey." It is much to be desired that this very valuable information should be made known to the members of the hunt and to young cavalrymen going into the field.

Medico-Literary Notes.

THE THIRTEENTH EDITION of Ringer's Handbook of Therapeutics is now in course of revision and will soon be published by Lewis & Co.

GOULD'S DICTIONARY OF MEDICINE is the only reference book of that description that is commended to medical students in the "Students' Number" of the London *Lancet* for 1896.

MR. EDWARD ATKINSON of Boston says that "Child Life Insurance" may more appropriately be termed "Child Death Insurance."

THE PUBLISHING HOUSE of Cromwell & Company, New York, are about to issue "Famous American Doctors," by C. E. L. Wingate.

IT IS REPORTED that a lady has presented the French Academy with 800,000 francs, the interest of which is to go to any one who will discover a cure for consumption.

DOCTOR—"Now, what did your father and mother die of?" Applicant—"Well, sir, I can't say as I do 'zactly remember, but 'twarn't nothin' serious."—*Punch*.

BOSTON is to have a magnificent new hospital in a few years, to cost $3,800,000. It is the gift of Peter Brigham, who died twenty years ago, and it will be for the indigent only.

THE SEVENTY-SIXTH BIRTHDAY of Dr. Rudolf Virchow was duly celebrated on Tuesday, October 13. Many telegrams of congratulations were received from the four quarters of the globe.

SURGEON-MAJOR HUESTON of the British army, professor in the medical school at Tientsin, has been made a mandarin and received the decoration of the Order of the Double Dragon from the Emperor of China.

DR. LUSK'S work on midwifery is to be translated under a governmental direction into Arabic for the use of the school of medicine at Cairo, and for the female pupils of the school of midwives.

IN NINETEENTH CENTURY, September, Dr. Percy Frankland argues in favor of having all milk boiled that is used in household consumption. Of all the articles of food, he holds milk is the one that affords the most congenial nidus for the bacteria of infectious disease.

THE LIBRARY of the late Dr. Thomas Addis Emmet, with his letters, pictures, etc., has been estimated to be worth $240,000. It has been purchased, however, in its entirety for the great Union Library, over which Dr. Billings now presides, for the sum of $150,000.

LARDOWSKY proposes the use of the new word "opotherapy" as a substitute for serotherapy and serum-therapy. These latter two words have had currency for some time, but the purists object to them as having a hybrid derivation. Opotherapy is shorter.

ST. BASIL THE GREAT has the credit of establishing for modern clinic medicine its first hospital. He quotes with favor the saying of Hesiod, "The perfect man is he who of himself knows what is right. The good man is he who gains that knowledge from others; while the third man, who can do neither, is really good for nothing."

MONSIGNOR G. H. DOANE, D.D., of Newark, writes to the Boston *Medical and Surgical Journal* about the time when he was a medical student and witnessed the harrowing scenes of the pre-anesthetic period. This eminent and reverend prelate confesses that his interest in surgery and medicine continue unabated.

THE HARVEIAN ORATION at the Royal College of Physicians was this year delivered by Dr. Joseph Frank Payne, Censor of the College, and the working editor of that laborious compilation of the College, "The Nomenclature of Disease," the last edition of which has recently been received and was noticed in the JOURNAL.

IT IS NOT generally known that "Yankee Doodle," the so-called "national air" of the United States, had for its composer a member of the medical profession. Dr. Richard Schuckburg has the credit of writing it. He was a medical officer in General Amherst's army at the time of the French and Indian war in 1755.

ABDURRAHMAN KHAN, Ameer of Afghanistan, has introduced vaccination into his country, by the advice of his English physician. Two calf lymph stations have been established and a proclamation has been issued from Cabul calling on the people to bring in their children to be vaccinated before next spring.

A COUPLE OF TEETH found near Weimar, are claimed by Dr. A. Nehring to be the oldest human teeth yet found in Europe. One of them, a permanent first molar, is remarkably like that of a chimpanzee, but much like that of the gorilla or orang. He also calls attention to the fact that the first premolar and last molar are reduced in size in modern man as compared with early man. This was known before; but he adds that he finds

the same state of things in domesticated, as compared with wild dogs. In the former, as in civilized man, the jaw is relatively feebly developed and there is a tendency to reduction of the last molar.

THE JOURNAL OF NERVOUS AND MENTAL DISEASE.—The management announces the following arrangement of the staff for 1897: Editors: Dr. Chas. L. Dana, Dr. F. X. Dercum, Dr. Philip Coombs Knapp, Dr. Chas. K. Mills, Dr. Jas. J. Putnam, Dr. B. Sachs, Dr. M. Allen Starr. Associate editors: Dr. Philip Meirowitz, Dr. Wm. G. Spiller. Managing Editor: Dr. Chas. Henry Brown, 25 West 45th St., New York, to whom address all editorial and business communications.

THE EDINBURGH MEDICAL JOURNAL will have a new publisher and a new editor and Edinburgh will, on Jan. 1, 1897, have a new monthly journal, the *Scottish Medical and Surgical Journal*, with Dr. William Russell as editor. The old editor of the older journal is one of the board of medical directors of the new journal. The profession will have absolute control of the latter, and all profits will go to the betterment of the journal.

THE LATE PROF. MORITZ SCHIFF of Geneva, died October 6, after a varied but most honorable career. The Italian press, lay as well as professional, teems with biographical detail regarding the late Professor Schiff, whose noble services to the country's medical schools are all the more remembered from his having been driven from his Florentine chair by an anti-vivisectionist agitation, largely fomented by "zoophilists" and homeopathists. His first wife, according to one biographer, was a Rothschild, who made it a condition of his sharing her fortune and faring sumptuously every day, that he would absolutely renounce his experiments on living animals. For a month after marriage he tried to accept the situation, but could stand it no longer and at the end of that time he had accepted the simpler life, with the return to the laboratory.

INDEX TO THE SEMAINE MÉDICALE.—The *Semaine Médicale* announces that it is preparing an index of its files for the last fifteen years, which will be the most complete ever attempted. The name of every person mentioned in it will be found in alphabetical order, with details and date of the work or discussion in connection with which it is mentioned. Every organ, disease, treatment, etc., will also be indexed, as also its normal and pathologic anatomy, pathology and therapeutics, and for the diseases, the etiology, symptomatology, diagnosis and treatment. Even for those who do not possess back numbers of the magazine it promises a complete résumé of all that has been accomplished in the medical sciences during these last important years. It will not be ready for a year yet and it is to be sold by subscription for ten francs, until April. After it is placed on the market the price will be fifteen francs.

Cincinnati.

THE MORTALITY report for the week shows: deaths from zymotic diseases 12; phthisis 9; other constitutional 9; local 63; developmental 2; violence 6; under 5 years 25; total 101; annual rate per 1,000, 15; preceding week 99; corresponding week in 1895, 98; 1894, 103; 1893, 134.

OUT OF ABOUT 700 practicing physicians of Cleveland 40 have failed to register, and affidavits have been prepared by the county prosecutor with a view of causing their arrest.

THE ASSOCIATION of the Surgeons of the Cincinnati, Jackson and Mackinaw Railway have decided to hold their next meeting in Cincinnati. Dr. G. I. Cullen has charge of the arrangements.

AN EPIDEMIC of diphtheria prevails at Saville, Ohio.

A CASE of tetanus was treated at the City Hospital last week successfully by the antitoxin serum injections.

THE CASE at the Cincinnati Hospital reported in the JOURNAL last week, in which the patient was unable to tell his name or home, although otherwise apparently well, died after two weeks' confinement in the hospital. A postmortem revealed an abscess in the cerebellum.

THE CINCINNATI HOSPITALS are now considering the feasibility of sending all cases of malignant disease considered incurable to the Branch Hospital. In future a committee of three members of the staff will be selected to purchase the books and periodicals for the library, instead of it being left to the librarian as formerly.

IN THE CASE of Young against Dr. J. L. Cleveland for damages for malpractice in the treatment of a fracture of the femur, the court gave a verdict for the defendant.

DR. H. J. STEPHENS of London, Ohio, recently sued a woman for $1,181 for medical services rendered, in response to which she claimed that as a result of the treatment received she had contracted the opium habit and was damaged to the extent of $3,000. The Doctor lost his case and the defendant was given $15 damages.

THE KENTUCKY court of appeals have affirmed the decision of the circuit court sentencing the dental student, Scott Jackson, to hang for the murder of Pearl Bryan.

DR. F. FORCHHEIMER is experimenting with subcutaneous vaccination at the City Hospital, the object being to avoid the sore arms. The virus is injected with a hypodermic syringe. The first experiment was made on November 20, and the result is being watched with considerable interest.

DR. J. H. LEATHERMAN of Columbus was found guilty last week in the Columbus police court of violating the Mosgrove registration law. Sentence was suspended pending appeal to the circuit court, to which the case will be taken as a test case.

A PHYSICIAN of this city was found guilty of misuse of the mails and fined $100 and costs by Judge Toft of the United States court last week. The violation of the postal laws consisted of sending a dunning postal card to a delinquent patient.

A CASE of buphthalmus was operated on last week at the Losanti Hospital. The eye was enucleated.

Hospitals.

THE OLIVET DAY NURSERY of Chicago, under the patronage of Dr. Julia Holmes Smith, Mrs. M. B. Carse, Mrs. L. G. Perce, Mrs. B. Hancock and Mrs. A. D. Wheeler, was organized in October, 1893, for the purpose of helping women who were obliged to leave their homes every day to go to work. With the other day nurseries of Chicago it is proving one of the most efficient and practical ways of helping those who desire to work. The nursery is situated at 281 Clybourn Avenue.

THE PUBLIC SERVICE.

Army Changes. Official List of changes in the stations and duties of officers serving in the Medical Department, U. S. Army, from Nov. 14 to Nov. 20, 1896.

Major Louis S. Tesson, Surgeon (Ft. Ethan Allen, Vt.), is granted leave of absence for four months, to take effect about Dec. 5, 1896.

The following named recently appointed Asst. Surgeons will report in person to the president of the Army Medical School, Washington, D. C., for the course of instruction: First Lieut. Louis Percy Smith, First Lieut. Marshall Morgan Cloud.

Major John D. Hall, Surgeon, is relieved from duty at Madison Bks., N. Y., and ordered to Ft. Wadsworth, N. Y., for duty, relieving Major Edward J. Comegys, Surgeon. Major Comegys, on being thus relieved, is ordered to Ft. Sill, Oklahoma Ter., for duty.

RETIREMENT.

Major John V. Lauderdale, Surgeon, retired from active service Nov. 13, 1896.

Change of Address.

Butterfield, F. A., from City Hospital to 713 Ashland Av., Rockford, Ill.
Bowers, C. E., from Anthony, Kan., to 4009 Russell Av., St. Louis, Mo.
Carnes, U. M., from Cleveland to Box 284, Canton, Ohio.
Coffman, G. L., from Thayer, Kan., to 1654 California Av., St. Louis.
Gallaher, Thos. J., from 1477 Clayton Av. to 1321 Race St., Denver, Colo.
Harvey, D. S., from 227 92d St. to Davis Bldg., 92d and Commercial Av., Chicago.
Maywit, L., from Chicago to 101st Pl. and Vincennes Road, Washington Heights, Ill.
Maughmer, G. C., from Waupecong to Kokomo, Ind.
Standish, Myles, new address, 6 St. James Av., Boston, Mass.
West, C. B., from Rome to 1723 S. Salina St., East Onondago, N. Y.

LETTERS RECEIVED.

American Journal Pub. Co., St. Louis, Mo.; Andrews, B. J., Burlington, Vt.; Alta Pharmacal Co., St. Louis, Mo.; American Medico-Surgical Bulletin, New York, N. Y.
Bluhm, Geo. J., Chicago; Battle Creek Sanitarium, Battle Creek, Mich., Brown, F. F., Advertising Agency, New York; Brown, Charles Henry, New York.
Canfield, Wm. B., Baltimore, Md.; Corr, A. C., Carlinville, Ill.; Cook, W. H., Comanche, Iowa.
Gilmore, J. A., Thomasville, Ala.
Hedden, J. W., South McAlester, I. T.; Hektoen, L., Chicago; Hummel, A. L., Advertising Agency, New York.
Jenks, E. P., New York.
Kime, R. R., Atlanta, Ga.; Kelley, Maus & Co., Chicago.
Ludwig, Henry C., New York; Laughlin Mfg. Co., Detroit, Mich.
Mohr, Chas. A., Mobile, Ala.; McFarland, George C., Jacksonville, Ill.
Nixon, J. W., Soldier, Kan.
Open Court Pub. Co., Chicago.
Pick, Dr. A. W., Hyannis, Mass.; Powell, N. A., Toronto, Canada; Penniman, D. B., Argyle, Minn.; Purdy, Charles W., Chicago; Parkinson, James H., Sacramento, Cal.
Ruck, Karl von, Asheville, N. C.; Reber, W. W, Leighton, Pa.; Reed, R. Harvey, Columbus, Ohio; Reeves, B. E., La Mar, N. C.; Rice, Geo. H., Sandoval, Ill.
Stoll, John J., Chicago; Shields, W. Bayard, St. Francis, Ark.
Todd, W. J., Mt. Washington, Md.; Tweedale, C. B. Cheboygan, Mich.; Tinker, K., Athens, Ohio; Tower, B. M., Conneaut, Ohio.